

Appendix A
CONTAINMENT AREA CALCULATIONS

CONTAINMENT SUMMARY FOR THE EOG FACILITY

<u>PAGE</u>	<u>CONTAINMENT AREA</u>	<u>SHEET NUMBER</u>	<u>CAPACITY (Gallons)</u>
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3	EOG LAB-PACK BUILDING TYPICAL DEPACK ROOM CONTAINMENT AREA CALCULATIONS	Sheet 11 of 18	177.40
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6	EOG's EXISTING PROCESS/STORAGE BUILDING DRUM STORAGE CONTAINMENT AREA CALCULATIONS	Sheet 9 of 18	11,270.49
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8	EOG TANK FARM BULK STORAGE CONTAINMENT AREA CALCULATIONS	Sheet 12 of 18	20,764.78
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**EOG LAB-PACK BUILDING
DRUM STORAGE CONTAINMENT AREA CALCULATIONS
(see Sheet 11 of 18)**

Formulas/Conversions

Volume of cube = $(l \times w)h$

Volume of cylinder = $\pi r^2 \times h$

Feet³ = 7.48 gallons

Volume of empty containment area

Containment area dimensions:

$l = 13 \text{ feet}$ $w = 20 \text{ feet}$ $h = 0.5 \text{ feet}$

Containment area volume in feet:

$(13 \text{ feet} \times 20 \text{ feet}) 0.5 \text{ feet} = 130 \text{ feet}^3$

Containment area volume in gallons:

$130 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 972.40 \text{ gallons}$

Volume of 29 drums

Drum dimensions:

$r = 1 \text{ foot}$ $h = 0.5 \text{ foot}$

Volume of one drum in feet:

$\pi r^2 \times h = 3.142 \times 1 \text{ foot}^2 \times 0.5 \text{ foot} = 1.571 \text{ feet}^3$

Volume of 29 drums in feet:

$1.571 \text{ feet}^3/\text{drum} \times 29 \text{ drums} = 45.56 \text{ feet}^3$

Volume of 29 drums in gallons:

$45.56 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 340.79 \text{ gallons}$

Volume of containment area less the volume occupied by 29 drums

$972.40 \text{ gallons} - 340.79 \text{ gallons} = 631.61 \text{ gallons}$

Volume of 10% containment storage capacity

$29 \text{ drums} \times 55 \text{ gallons/drum} = 1,595 \text{ gallons}$

$1,595 \text{ gallons} \times 0.10 = 159.50 \text{ gallons}$

Solution

Volume of containment area with 29 drums must be greater than 55 gallons or 10% of the total containment storage capacity, whichever is greater.

631.61 gallons is greater than 159.50 gallons thus containment capacity is sufficient.

EOG LAB-PACK BUILDING
TYPICAL DEPACK ROOM CONTAINMENT AREA CALCULATIONS
(see Sheet 11 of 18)

Formulas/Conversions

Volume of cube = $(l \times w)h$

Volume of cylinder = $\pi r^2 \times h$

Feet³ = 7.48 gallons

Volume of empty containment area

Containment area dimensions:

$l = 12 \text{ feet}$ $w = 9 \text{ feet}$ $h = 0.5 \text{ feet}$

Containment area volume in feet:

$(12 \text{ feet} \times 9 \text{ feet}) 0.5 \text{ feet} = 54 \text{ feet}^3$

Containment area volume in gallons:

$54 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 403.92 \text{ gallons}$

Volume of containment area occupied by work bench and hood

Work bench dimensions:

$l = 12 \text{ feet}$ $w = 3 \text{ feet}$ $h = 0.5 \text{ feet}$

Hood dimensions:

$l = 4 \text{ feet}$ $w = 3 \text{ feet}$ $h = 0.5 \text{ feet}$

Occupied containment area volume in feet:

$[(12 \text{ feet} \times 3 \text{ feet}) 0.5 \text{ feet}] + [(4 \text{ feet} \times 3 \text{ feet}) 0.5 \text{ feet}] = 24 \text{ feet}^3$

Occupied containment area volume in gallons:

$24 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 179.52 \text{ gallons}$

Volume of 4 drums within containment area

Drum dimensions:

$r = 1 \text{ foot}$ $h = 0.5 \text{ foot}$

Volume of one drum in feet:

$\pi r^2 \times h = 3.142 \times 1 \text{ foot}^2 \times 0.5 \text{ foot} = 1.571 \text{ feet}^3$

Volume of drums in feet:

$1.571 \text{ feet}^3/\text{drum} \times 4 \text{ drums} = 6.28 \text{ feet}^3$

Volume of 4 drums in gallons:

$6.28 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 47.0 \text{ gallons}$

EOG LAB-PACK BUILDING
TYPICAL DEPACK ROOM CONTAINMENT AREA CALCULATIONS
(Continued)

Volume of containment area less the volume occupied by work bench, hood and 4 drums

$$(403.92 \text{ gallons} - 179.52 \text{ gallons}) - 47.0 \text{ gallons} = 177.40 \text{ gallons}$$

Volume of 10% containment storage capacity

$$4 \text{ drums} \times 55 \text{ gallons/drum} = 220 \text{ gallons}$$

$$220 \text{ gallons} \times 0.10 = 22 \text{ gallons}$$

Solution

Volume of containment area with 4 drums must be greater than 55 gallons or 10% of the total containment storage capacity, whichever is greater.

177.40 gallons is greater than 55 gallons thus containment capacity is sufficient.

**EOG LAB-PACK BUILDING
BULK STORAGE CONTAINMENT AREA CALCULATIONS
(see Sheet 11 of 18)**

Formulas/Conversions

Volume of cube = $(l \times w)h$

Volume of cylinder = $\pi r^2 \times h$

Feet³ = 7.48 gallons

Volume of empty containment area

Containment area dimensions:

$$l = 15.5 \text{ feet} \quad w = 15.5 \text{ feet} \quad h = 4 \text{ feet}$$

Containment area volume in feet:

$$(15.5 \text{ feet} \times 15.5 \text{ feet}) 4 \text{ feet} = 961 \text{ feet}^3$$

Containment area volume in gallons:

$$961 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 7,188.28 \text{ gallons}$$

Volume of 5,500-gallon tank

Tank dimensions beneath top of containment wall:

$$r = 4 \text{ feet} \quad h = 4 \text{ feet}$$

Volume of 5,500-gallon tank in feet:

$$\pi r^2 \times h = 3.142 \times 16 \text{ feet}^2 \times 4 \text{ feet} = 201.09 \text{ feet}^3$$

Volume of 5,500-gallon tank in gallons:

$$201.09 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 1,504.15 \text{ gallons}$$

Volume of containment area less volume occupied by 5,500-gallon tank

$$7,188.28 \text{ gallons} - 1,504.15 \text{ gallons} = 5,648.13 \text{ gallons}$$

Solution

Volume of containment area with 5,500-gallon tank must be greater than 5,500 gallons or 10% of the total containment storage capacity, whichever is greater.

5,648.13 gallons is greater than 5,500 gallons thus containment capacity is sufficient.

**EOG's EXISTING PROCESS/STORAGE BUILDING
DRUM STORAGE CONTAINMENT AREA CALCULATIONS
(see Sheet 9 of 18)**

Formulas/Conversions

Volume of rectangle = $(l \times w)h$

Feet³ = 7.48 gallons

Drum Capacity:

708 drums hazardous waste (on pallets, no stacking)
(or)
1416 drums nonhazardous waste (on pallets, double stacked)

Dimensions of building

Total Building 78 feet x 148 feet x 0.25 feet = 2,886 feet³

Office Area 34 feet x 34 feet x 0.25 feet = 289 feet³

Staging Area 20 feet x 25 feet x 0.25 feet = 125 feet³

Solids Work Area 18 feet x 57 feet x 0.25 feet = 256.50 feet³

Pillars 3(1 feet x 1 feet x 0.25 feet) = 0.75 feet³

Calculation of cubic footage of containment area

Total building dimension minus office area, staging area, solids work area, and pillars.

$$2,886 \text{ feet}^3 - 289 \text{ feet}^3 - 125 \text{ feet}^3 - 256.50 \text{ feet}^3 - 0.75 \text{ feet}^3 = 2,214.75 \text{ feet}^3$$

Volume of empty containment area

$$2,214.75 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 16,566.33 \text{ gallons}$$

Volume of 177 pallets holding 4 drums each

Drum pallet dimensions: 4 feet x 4 feet x 0.25 feet = 4 feet³

$$4 \text{ feet}^3 \times 177 \text{ pallets} = 708 \text{ feet}^3$$

$$708 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 5,295.84 \text{ gallons}$$

Volume of containment area with 180 pallets holding drums

$$16,566.33 \text{ gallons} - 5,295.84 \text{ gallons} = 11,270.49 \text{ gallons}$$

Volume of 10% containment storage capacity

$$1416 \text{ drums} \times 55 \text{ gallons/drum} = 77,880 \text{ gallons}$$

$$77,880 \text{ gallons} \times 0.10 = 7,788 \text{ gallons}$$

Solution

Volume of containment area with 177 pallets of drums (708 drums hazardous waste not stacked or 1416 drums nonhazardous waste double stacked) must be greater than 55 gallons or 10% of the total containment storage capacity, whichever is greater.

11,270.49 gallons is greater than 7,788 gallons thus containment capacity is sufficient.

EOG's PROPOSED PROCESS/STORAGE BUILDING DRUM STORAGE CONTAINMENT AREA CALCULATIONS (see Sheet 10 of 18)	
Formulas/Conversions	
Volume of cube = $(l \times w)h$	Drum Capacity: 2,000-gallon blending tank 1,136 drums hazardous waste (on pallets, no stacking) (or) 2,272 drums nonhazardous waste (on pallets, double stacked)
Feet ³ = 7.48 gallons	
Dimensions of building	
Total Building	117 feet x 148 feet x 0.25 feet = 4,329 feet ³
Blending Area	22 feet x 16 feet x 0.25 feet = 88 feet ³
Office Area	34 feet x 34 feet x 0.25 feet = 289 feet ³
Staging Area	20 feet x 25 feet x 0.25 feet = 125 feet ³
Solids Work Area	18 feet x 57 feet x 0.25 feet = 256.50 feet ³
Pillars	3(1 feet x 1 feet x 0.25 feet) = 0.75 feet ³
Calculation of cubic footage of containment area	
Total building dimension minus blending area, office area, staging area, solids work area, and pillars.	
4,329 feet ³ - 88 feet ³ - 289 feet ³ - 125 feet ³ - 256.50 feet ³ - 0.75 feet ³ = 3,569.75 feet ³	
Volume of empty containment area	
3,569.75 feet ³ x 7.48 gallons/feet ³ = 26,701.73 gallons	
Volume of 285 pallets holding 4 drums each	
Drum pallet dimensions: 4 feet x 4 feet x 0.25 feet = 4 feet ³	
4 feet ³ x 284 pallets = 1,136 feet ³	
1,136 feet ³ x 7.48 gallons/feet ³ = 8,497.28 gallons	
Volume of containment area with 284 pallets holding drums	
26,701.73 gallons - 8,497.28 gallons = 18,204.45 gallons	
Volume of 10% containment storage capacity	
2,272 drums x 55 gallons/drum = 124,960 gallons	
124,960 gallons + 2,000-gallon tank = 126,960 gallons	
126,960 gallons x 0.10 = 12,696 gallons	
Solution	
Volume of containment area with 284 pallets of drums (1,136 drums hazardous waste not stacked or 2,272 drums nonhazardous waste double stacked) and a 2,000-gallon tank must be greater than 2,000 gallons or 10% of the total containment storage capacity, whichever is greater.	
18,204.45 gallons is greater than 12,696 gallons, thus containment capacity is sufficient.	

**EOG TANK FARM
BULK STORAGE CONTAINMENT AREA CALCULATIONS
(see Sheet 12 of 18)**

Formulas/Conversions

$$\text{Volume of cube} = (l \times w)h$$

$$\text{Hypotenuse} = (l + w)\frac{1}{2}$$

$$\text{Volume of cylinder} = \pi r^2 \times h$$

$$\text{Volume of Pyramid} = \frac{1}{3} (\text{base area}) \times h$$

$$\text{Feet}^3 = 7.48 \text{ gallons}$$

$$\text{Rise at hypotenuse} = \text{slope} \times \text{run}$$

Volume of containment area occupied by sloped base

Containment area dimensions:

$$l = 38 \text{ feet}$$

$$w = 38 \text{ feet}$$

$$h = 3.5 \text{ feet}$$

$$\text{Slope (base)} = 2\% \text{ from SW to NE}$$

Containment area of "Volume 1" in feet:

$$1) \text{ SW to NE hypotenuse} = (38^2 + 38^2)^{\frac{1}{2}} = 53.74 \text{ feet}$$

$$2) \text{ Distance of hypotenuse to SW or NE corner} = 53.74/2 = 26.87 \text{ feet}$$

$$3) \text{ Volume of sloped base from SW corner to hypotenuse} = \text{Volume}^1$$

$$4) \text{ Volume of pyramid}$$

$$\begin{aligned} h &= \frac{1}{2} \text{hypotenuse} \\ &= \frac{1}{2}(53.74) \\ &= 26.87 \text{ feet} \end{aligned}$$

$$5) \text{ Rise at hypotenuse} = 0.02 \times 26.87 \text{ feet} = 0.537 \text{ feet}$$

$$6) \text{ Pyramide volume} = \frac{1}{3} (53.74 \text{ feet} \times 0.537 \text{ feet}) (26.87 \text{ feet}) = 258.67 \text{ feet}^3$$

Containment area "Volume 3" in feet:

$$1) \text{ "Volume 3"} = \text{rise at hypotenuse} \times (l \times w)\frac{1}{2}$$

$$2) \text{ "Volume 3"} = 0.537 \text{ feet} \times (38 \text{ feet} \times 38 \text{ feet})\frac{1}{2}$$

$$3) \text{ "Volume 3"} = 387.71 \text{ feet}^3$$

Containment area "Volume 2" in feet:

$$1) \text{ By Geometry: "Volume 1"} + \text{"Volume 2"} = \text{"Volume 3"}$$

$$2) \text{ "Volume 2"} = 387.71 \text{ feet}^3 - 258.67^3$$

$$3) \text{ "Volume 2"} = 129.04 \text{ feet}^3$$

Total volume occupied by sloped base

$$1) \text{ "Volume 1"} + \text{"Volume 2"} + \text{"Volume 3"}$$

$$2) 258.67 \text{ feet}^3 + 129.04 \text{ feet}^3 + 387.71 \text{ feet}^3 = 775.42 \text{ feet}^3$$

$$3) 775.42 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 5,800.14 \text{ gallons}$$

**EOG TANK FARM
BULK STORAGE CONTAINMENT AREA CALCULATIONS
(Continued)**

Volume of empty containment area with sloped base

Containment area dimensions:

$$l = 38 \text{ feet} \quad w = 38 \text{ feet} \quad h = 3.5 \text{ feet}$$

Containment area volume in feet:

$$(38 \text{ feet} \times 38 \text{ feet}) 3.5 \text{ feet} = 5,054 \text{ feet}^3$$

Containment volume in gallons:

$$5,054 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 37,803.92 \text{ gallons}$$

Volume of 12,000-gallon tank

Tank dimensions:

$$r = 6 \text{ feet} \quad h = 3.5 \text{ feet}$$

Volume of 12,000-gallon tank in feet beneath the top of the containment wall:

$$\pi r^2 \times h = 3.142 \times 36 \text{ feet}^2 \times 3.5 \text{ feet} = 395.89 \text{ feet}^3$$

Volume of 12,000-gallon tank in gallons:

$$395.89 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 2,961.27 \text{ gallons}$$

Volume of four 12,000-gallon tanks in gallons:

$$2,961.27 \text{ gallons/tank} \times 4 \text{ tanks} = 11,845.09 \text{ gallons}$$

Volume of sloped base occupied by tank volume

(Assume tanks installed 90° to ground surface)

Rise = Slope x Run

$$\text{Rise} = 0.002 \times 12 \text{ feet} = 0.24 \text{ feet}$$

Volume occupied by tank = $\frac{1}{2}\pi r^2 h$

$$\text{Volume occupied by tank} = \frac{1}{2}\pi (6 \text{ feet})^2 (0.24 \text{ feet}) = 13.57 \text{ feet}^3$$

Volume occupied by 4 tanks = 4 tanks x 13.57 feet³ = 54.29 feet³

Volume in gallons = 54.29 feet³ x 7.48 gallons/feet³ = 406.09 gallons

Volume of sloped containment area with four 12,000-gallon tanks

Volume of empty containment area = 37,803.92 gallons

Volume of sloped base with 4 tanks = 5,800.14 gallons - 406.09 gallons = 5,394.05 gallons

Volume of four 12,000-gallon tanks within containment area = 11,845.09 gallons

Volume of sump = 200 gallons

Volume of sloped containment area with four 12,000-gallon tanks and sump
= (37,803.92 gallons - 5,394.05 gallons - 11,845.09 gallons) + 200 gallons = 20,764.78 gallons

**EOG TANK FARM
BULK STORAGE CONTAINMENT AREA CALCULATIONS
(Continued)**

Solution

Volume of containment area with four 12,000-gallon tanks must be greater than 12,000 gallons or 10% of the total containment storage capacity, whichever is greater.

20,764.78 gallons is greater than 12,000 gallons thus containment capacity is sufficient.

**EOG LOADING/UNLOADING PAD
CONTAINMENT AREA CALCULATIONS
(see Sheet 12 of 18)**

Formulas/Conversions

$$\text{Volume of cube} = (l \times w)h$$

$$\text{Volume of right triangle} = [(l \times w)h]/2$$

$$\text{Area of right triangle} = a^2 + b^2 = c^2$$

$$\text{Feet}^3 = 7.48 \text{ gallons}$$

Volume of containment area

dimensions:

$$l = 19.5 \text{ feet} \quad w = 24 \text{ feet} \quad \text{Slope} = 2\%$$

Solve for height (h):

$$h = \text{Slope} \times l$$

$$h = 0.02 \times 19.5 \text{ feet}$$

$$h = 0.39 \text{ feet}$$

Containment area in feet³:

$$[(h \times l)w] = y \text{ feet}^3$$

$$[(0.39 \text{ feet} \times 19.5 \text{ feet})24 \text{ feet} = 182.52 \text{ feet}^3$$

Containment area volume in gallons:

$$182.52 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 1,365.25 \text{ gallons}$$

Volume of trench:

Trench dimensions:

$$l = 18 \text{ feet} \quad w = 1 \text{ foot} \quad \text{Slope} = 2\%$$

Solve for height (h):

$$h = \text{Slope} \times l$$

$$h = 0.02 \times 18 \text{ feet}$$

$$h = 0.36 \text{ feet}$$

Trench in feet³:

$$[(h \times l)w]/2 = y \text{ feet}^3$$

$$[(0.36 \text{ feet} \times 18 \text{ feet})1 \text{ foot}]/2 = 3.24 \text{ feet}^3$$

Trench volume in gallons:

$$3.24 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 24.24 \text{ gallons}$$

**EOG LOADING/UNLOADING PAD
CONTAINMENT AREA CALCULATIONS
(Continued)**

Volume of sump within containment area

Sump dimensions:

$$l = 3 \text{ feet} \quad w = 3 \text{ feet} \quad h = 3 \text{ feet}$$

Sump in feet³:

$$(3 \text{ feet} \times 3 \text{ feet}) 3 \text{ feet} = 27 \text{ feet}^3$$

Sump volume in gallons:

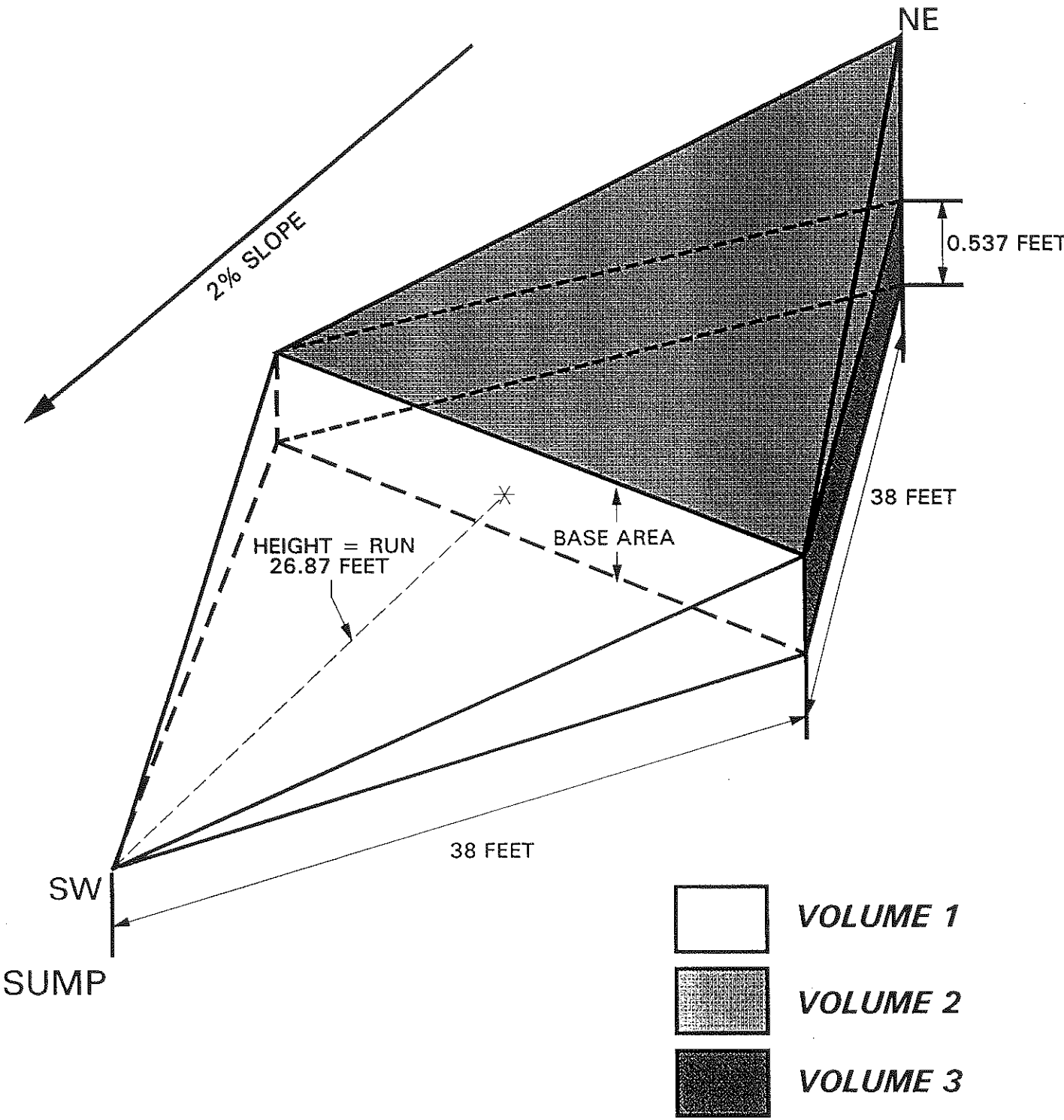
$$27 \text{ feet}^3 \times 7.48 \text{ gallons/feet}^3 = 201.96 \text{ gallons}$$

Total loading/unloading area volume

Volume of containment area including trench and sump volumes.

$$1,365.25 \text{ gallons} + 24.24 \text{ gallons} + 201.96 \text{ gallons} = 1,591.45 \text{ gallons}$$

SLOPED TANK FARM CONTAINMENT AREA



LAB PACK BUILDING CONTAINMENT VOLUME CALCULATIONS

CONTAINMENT VOLUME FOR ROOMS WITH 29-55 gallon DRUMS LAB-PACK BUDG

CONTAINMENT VOLUME TO BE 10% OF TOTAL STORED MATERIAL OR
CONTENTS OF 1 STORAGE TANK - WHICHEVER IS LARGER
(REF. NR 640.13(1))

1. 55 gallons (1 drum)

2. $29 \times 55 \text{ gallons} \times 0.1 = 160 \text{ gallons} \leftarrow \text{GOVERNS.}$

$$\text{So: } 160 \text{ gallons} \times 0.13378 \text{ ft}^3/\text{gallon} = 21.4 \text{ ft}^3 \text{ req'd}$$

ROOM IS 13' x 20'

55 gallon DRUMS ARE 22" IN ϕ .

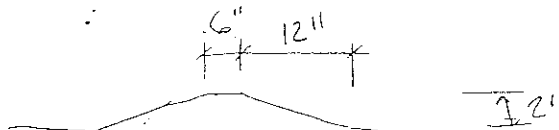
DETERMINE MIN. CURB HEIGHT

$$\begin{aligned} 13' \times 20' &= 260 \text{ ft}^2 \\ - 29 \left[\pi \left(\frac{11''}{12''} \right)^2 \right] &= 75.56 \text{ ft}^2 \\ \hline 183.44 \text{ ft}^2 \end{aligned}$$

29-55 gallon DRUM AREA

$$h = \frac{21.4 \text{ ft}^3}{183.44 \text{ ft}^2} = 0.117 \text{ ft} = 1 \frac{13}{32}'' \text{ min curb height}$$

USE 2" CURB



$$\begin{aligned} 13' \times 20' \times .167' &= 43.4 \text{ ft}^3 \\ - 29 \left[\pi \left(\frac{11''}{12''} \right)^2 \right] (.167') &= 12.6 \text{ ft}^3 \\ - 1.0' \times .167' \times 13' \times \frac{1}{2} &= 1.1 \text{ ft}^3 \end{aligned}$$

FLOOR SLOPES 1 1/2" TO BACK WALL

$$+ 12' \times 13' \times \frac{1}{2} \times 20' = 15.6 \text{ ft}^3$$

$$29.7 \text{ ft}^3 + 15.6 \text{ ft}^3 = 45.3 \text{ ft}^3$$

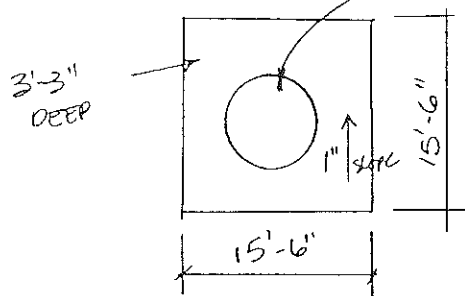
$$45.3 \text{ ft}^3 \times 7.43052 \text{ gallons/cuft} = 338 \text{ gallons}$$

338 gallons \geq 160 gallons - OK.

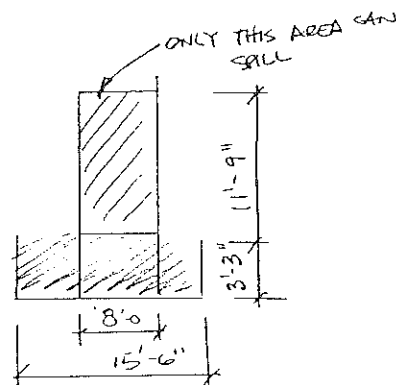
USE 2" HIGH CURB & 1 1/2" ROOM SLOPE

CONTAINMENT VOLUME - LAB PACK BUILDING

FOR 5500 gallon TANK ROOM
8' Ø x 15' HIGH TANK



CONTAINMENT
AREA



CONTAINMENT AREA

$$\begin{aligned} 15.5' \times 15.5' \times 3.25' &= 780.8 \text{ ft}^3 \\ \text{slope} + 15.5' \times .08' \times \frac{1}{2} \times 15.5' &= 9.6 \text{ ft}^3 \\ \hline 790.4 \text{ ft}^3 \end{aligned}$$

$$790.4 \text{ ft}^3 (7.48052 \text{ gallon/ft}^3) = 5912.6 \text{ gallon}$$

REQ'D CONTAINMENT = 5500 gallon

Actual = 5913 gallon

OK

USE 3'-3" HIGH WALL & 1" FLOOR SLOPE

TANK FARM CONTAINMENT VOLUME CALCULATIONS

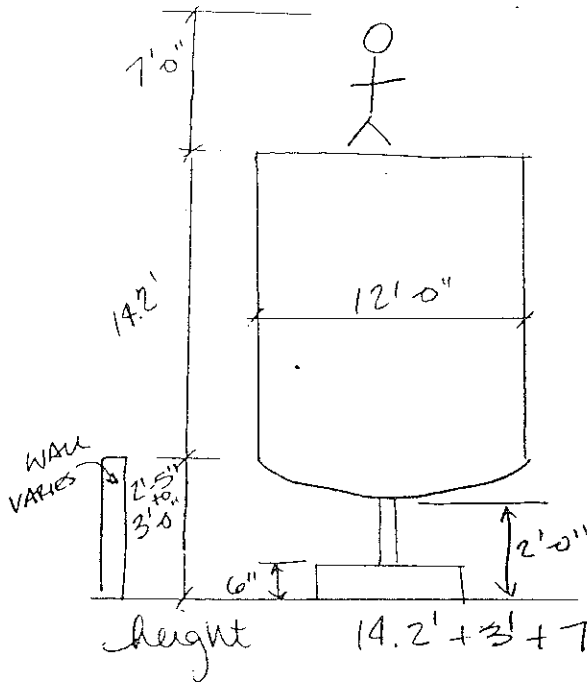
Sheet 1 of 2

TANK FARM - CONTAINMENT VOLUME

12000 gallon tank

12'-0" ϕ tank.

TANK HAS DISHED BOTTOM & FLAT TOP



$$\frac{1 \text{ gallon}}{12000 \text{ gallons}} = \frac{.13318 \text{ ft}^3}{X}$$

$$X = 1605.4 \text{ ft}^3$$

$$12' \phi = A = \pi (6')^2 = 113.1 \text{ ft}^2$$

$$\text{tank height} = \frac{1605.4}{113.1} = 14.2'$$

BUILDING HEIGHT (approx.)
CLEAR

CONTAINMENT REQUIREMENTS

ONE TANK OR 10% OF TOTAL

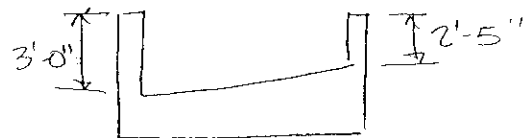
ONE TANK = 12000 gallons 10% = 4800 gallons
 governs.

VOLUME

$$\begin{aligned} 38' \times 38' \times 3' &= 4332 \text{ ft}^3 \\ - (.5' \times 2' \times 2') (16) &= 32 \text{ ft}^3 \\ - .53' (40' \times 40' \times .5) &= 464 \text{ ft}^3 \\ \hline &3836 \text{ ft}^3 \end{aligned}$$

$$\begin{aligned} \text{STAIR PAD} - (3' \times 1' \times .5') &= - 1.5 \text{ ft}^3 \\ \text{STAIR PADS} - (4) (1' \times 1' \times .5') &= - 2.0 \text{ ft}^3 \\ \hline &3832.5 \text{ ft}^3 \end{aligned}$$

for pads - tank
 for slope - assumes $\frac{1}{3}''/\text{ft}$
 7.1" drop



TANK FARM - CONTAINMENT VOLUME (CONT)

$$3832.5 \text{ ft}^3 (7.48052 \text{ gallons/ft}^3) = 28669 \text{ gallons}$$

DISH ON BOTTOM OF TANKS 780 gallons/tank

$$- 780 \text{ gallons}(4) = 3120 \text{ gallons}$$

* NOTE: EXACT TANK HEIGHT
NOT DETERMINED - CONSERVATIVE
TO SUBTRACT ENTIRE VOLUME OF
TANK DISH.

Also 200 gallon SUMP IN BUILDING

$$+ 200 \text{ gallons}$$

Also ACCESS STAIRS CONSTRUCTED OF METAL FRAMING &
GRATING

Assumed loss 50 gallons.

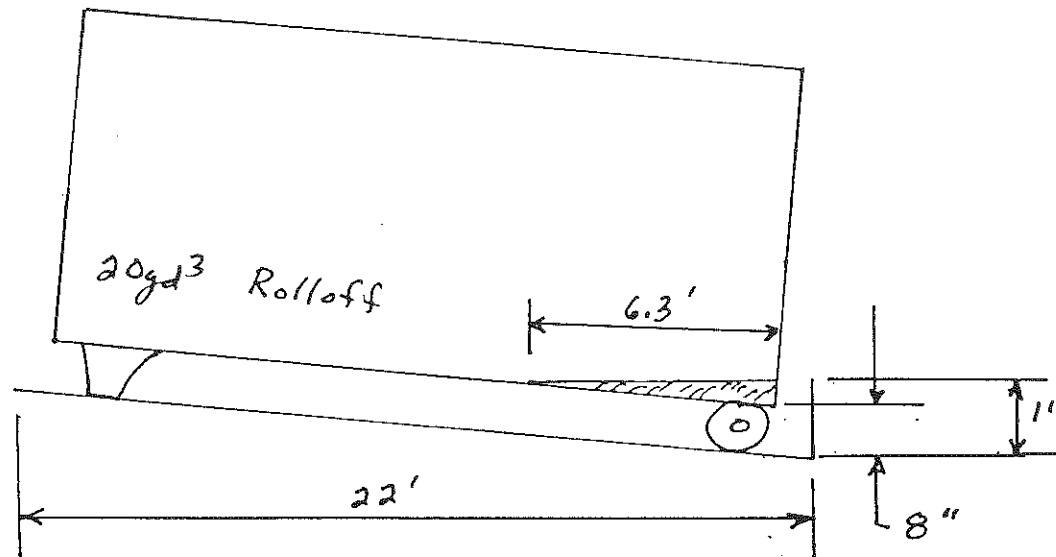
TOTAL CONTAINMENT

$$28669 \text{ gal} - 3120 \text{ gallons} + 200 \text{ gal} - 50 \text{ gallons} = 25699 \text{ gal}$$

USE 25700 gallons CONTAINMENT VOLUME.

SINCE 25700 gallons \geq 12000 gallons OK

VOLUME CALCULATIONS FOR SECONDARY CONTAINMENT



Assumptions

- 1) 60' x 22' containment area
- 2) 1 ft high berm wall far end
- 3) floor slope front to back
- 4) 6 Rolloffs stored in containment area
- 5) Rolloffs have 8 inches of floor clearance

Secondary Containment

60' x 22' sloped floor with 1 ft vertical drop
 (Immersion of rolloffs)

$$V = \frac{1}{2}(60)(22)(1) - 6 \left[\frac{1}{2}(6.3)(7.3)\left(\frac{4}{12}\right) \right]$$

$$= 660 \text{ ft}^3 - 46 \text{ ft}^3$$

$$= 614 \text{ ft}^3 \times \frac{1 \text{ yd}^3}{27 \text{ ft}^3}$$

$$= 22.7 \text{ yd}^3 > 20 \text{ yd}^3 \quad \text{OK}$$

Appendix B

SAFETY AND EMERGENCY EQUIPMENT

EMERGENCY AND DECONTAMINATION EQUIPMENT		
Type of Equipment	Location	Use
Hand-held fire extinguishers	Warehouse entrances and exists.	To put out a larger than 3-foot-diameter fire and easily moved
Eye wash	Entrance to the warehouse and labpack building. Restrooms.	To flush splashed materials from eyes or face
Safety showers	Entrance to the warehouse and labpack building. Restrooms.	To wash off material that may be splashed on an employee
Hand-held air horn	All processing stations throughout the warehouse and labpack building	To sound alarm for emergencies
First aid stations	Laboratory, warehouse and labpack building	To handle non-serious injuries
Alarm actuators	All entrances and exits throughout the warehouse and labpack building	For security and for emergencies
Internal telephone communications	Warehouse and labpack building walls	To notify and instruct in the event of an emergency
Two-way radios	All areas of the warehouse and labpack building	To notify and instruct in the case of an emergency
Zorbal, sand, and/or other absorbent materials	Outside of the laboratory and throughout the warehouse and labpack building	To contain and cleanup spilled materials
Fire blankets	Outside the laboratory and throughout the warehouse and labpack building	To control and/or extinguish fires or put out flames on personnel
Emergency stretchers	Outside the laboratory and the office in the labpack building	To remove injured personnel

PERSONAL PROTECTIVE EQUIPMENT		
Type of Equipment	Location	Use
Five-Minute emergency air packs	Throughout the warehouse and labpack building	To supply 5 minutes of air for emergency escapes
Self contained breathing apparatus (air pack)	On the supply shelves in the warehouse and in the office of the labpack building	For emergencies or for confined-space work. Will supply 30 minutes of air
Organic vapor air filter respirators	Throughout the warehouse and labpack building	To minimize employee exposure
Safety glasses	Laboratory and labpack building	To protect the eyes
Safety goggles	Laboratory and labpack building	To protect the eyes
Safety boots	Laboratory and labpack building	To protect the feet
Safety gloves	Laboratory and labpack building	To protect the hands
Tyvek® coveralls	Laboratory and labpack building	To protect the body
Uniforms	Laboratory and labpack building	To protect the body

Appendix C

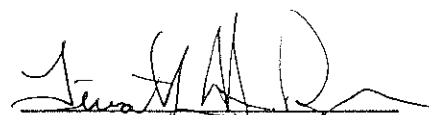
**SPILL PREVENTION CONTROL AND
COUNTERMEASURE PLAN (SPCC PLAN)**

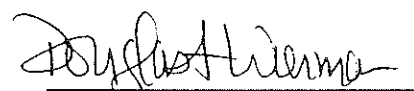
**SPILL PREVENTION CONTROL AND
COUNTERMEASURES PLAN**

prepared for:
**EOG DISPOSAL, INC.
WAUKESHA, WISCONSIN**

prepared by:
**RMT, INC.
SCHAUMBURG, ILLINOIS**

SEPTEMBER 1994


Timothy H. Danzer, C.H.M.M.
Project Environmental Scientist


Douglas A. Wierman, C.P.G.



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Section 1 INTRODUCTION

1.1 Background

On January 11, 1974 spill prevention regulations, to prevent oil pollution, became law (40 CFR, Parts 112, 113, and 114). The purpose of these regulations is to prevent harmful discharges of oil into navigable waters and to contain such discharges if they should occur. The definition of a "harmful discharge" is one which would cause a sheen or discoloration of the surface of the water, or a sludge or emulsion to be deposited beneath the surface of the water. The regulations require the development and implementation of a Spill Prevention Control and Countermeasure Plan (SPCC Plan) for all applicable facilities. The two fold purpose of this plan is to prevent discharges when possible and to contain and clean them up if and when they occur. New facilities are required to prepare the plan within six months of their initial operation date and to have the plan implemented within one year of the first day of operation. The regulations also require a review and evaluation of existing SPCC Plans once every three years.

To conform with these regulations, EOG Disposal, Inc. (EOG) has prepared the following plan for their storage facility located in Milwaukee, Wisconsin. The applicability of the regulations is premised on the volume of oil (as defined in 40 CFR Part 112) materials stored at the site and the reasonable chance of a spill event resulting in a harmful discharge. To facilitate the determination of criteria and in accordance with good engineering practice, it has been necessary to estimate the most probable modes of failure.

The oil storage facilities at this location consists of the following:

- Four 12,000-gallon aboveground storage tanks, located in the tank farm area, that provides storage prior to transfer off-site.
- A 2,000-gallon blending aboveground tank.
- Two 5,500-gallon aboveground storage tanks, located in the labpack building, that provides storage prior to transfer off-site.
- A capacity to store 2,272 drums of nonhazardous waste or 1,281 drums of hazardous waste or any combination of nonhazardous and hazardous waste.

1.2 Purpose

This plan describes the personnel, organization, and management policies and procedures that are in place to minimize the possibility of an accidental release of oil to the environment. Should a release occur, this plan outlines procedures to stop spillage and to contain and cleanup the spill to minimize environmental impact. This plan also outlines safe procedures to prevent personal injury to those involved in containment and clean-up activities.

A successful spill plan requires the full approval and support of management at a level of authority to commit the necessary resources to carry out this plan to prevent contamination of surface water.

Section 2
SPILL HISTORY

Operations at the EOG facility have been in existence since September, 1992. No reportable quantity spills have occurred at the EOG complex since operations began in 1992.

Section 3
SPILL PATHWAYS

The EOG facility is located on a relatively level parcel of land. The oil usage and storage areas are located within the facility warehouse, labpack building, and tank farm. The labpack building and tank farm are located east of the warehouse. Surface runoff migrates in the direction of the unnamed ditch. Thus, in the unlikely event of a spill escaping the tank truck containment areas and/or the buildings, based on the existing surface runoff and storm sewer, the petroleum product would migrate toward storm sewer collection drains and/or the unnamed ditch. The storm sewer collection drains and the unnamed ditch discharge to Lincoln Creek. Lincoln Creek flows to the Milwaukee River which flows to Lake Michigan.

Section 4 SPILL PREVENTION AND CONTROL

4.1 General Information

This plan identifies where oil spills might occur at this site, explains how the existing facility will contain those spills, and describes the actions that will be taken to prevent the spill from reaching surface waters. Spills can be prevented through the construction of properly designed facilities and the utilization of sound operating procedures which are aggressively supported by management. Spills which do occur can be contained and cleaned up before they reach surface waters if they are detected quickly and corrective action is taken immediately.

4.2 Identification of Potential Spill Sources

Three areas within the EOG facility have been identified as potential oil spill sources:

- The above ground storage tank farm.
- A 2,000-gallon blending aboveground tank.
- Two 5,500-gallon aboveground storage tanks.
- A capacity to store 2,272 drums of nonhazardous waste or 1,281 drums of hazardous waste or any combination of nonhazardous and hazardous waste.

A layout of the facility showing these areas are provided on Sheet 2 of 18.

4.3 12,000-gallon Aboveground Storage Tank Area

Area Description - Four aboveground storage tanks with normal capacity of approximately 12,000 gallons each (48,000-gallons total), makes up the storage capacity. The aboveground tanks are Underwriter's Laboratory (UL) approved, and constructed of carbon steel. The dimensions of each tank is 12 feet (maximum outside diameter), by 14 feet high.

Materials from the 2,000-gallon aboveground blending tank located on the west side of the facility warehouse are pumped via aboveground piping directly to the aboveground tanks located in the tank farm (see Subsection 4.4). Periodically tanker trucks unload the materials from the 12,000-gallon storage tanks by a flexible discharge line located in the tank farm unloading area located adjacent to the tank farm.

A diagram of the flow of product through the facility is provided in Figure 1 that follows this text. As depicted in Figure 1, liquid wastes are stored in the four 12,000-gallon tanks prior to transport off-site.

All of EOG fuels and wastes are transported off-site on an as needed basis. Written tank truck loading and unloading procedures are followed to ensure safe material transfer.

Containment Structures - The tanks are situated within a lined and coated concrete containment area which is canopied to prevent precipitation run-on and provides containment for approximately 20,760 gallons.

Area Drainage - Any spillage from the aboveground tank area would be contained by the containment area. However, in the unlikely event that a spill escapes the containment area, the spillage would flow by gravity via overland pathways and/or area storm sewers from the site drains to Lincoln Creek via an unnamed ditch and/or the storm sewer system. Visual examination of the unnamed ditch and the storm drain ensures that no spillage is inadvertently discharged into navigatable waters or the sewer system.

Fail-Safe Devices - All tanks are equipped with a high level alarm which is integrated with automatic cut-off system for the feed pumps, thereby providing additional overflow protection.

Procedures - EOG shall follow procedures whereby oil levels are checked routinely, signs of spills are reported, and fuel oil transfer operations are conducted in a safe manner.

Inspections and Records - Records regarding inspections of the aboveground storage tank area, tank truck loading logs, and maintenance schedules will be maintained. Responsible staff at EOG will complete the appropriate recording and inspection forms as contained in the Inspection Schedule during each inspection, and will maintain copies for a minimum of 3 years after the date of the inspection. Any amendments or changes to the SPCC Plan will be consistent with inspections and record keeping.

Personnel - It is the responsibility of the Operations Manager to implement the SPCC Plan, maintain the necessary records and properly train employees in oil spill prevention and control. Engineering

and management personnel are available and have authority to commit the needed resources for compliance.

Security - Access to the tank farm is limited to select employees and escorted visitors only. The tank farm is located within the facility boundary. The facility boundary contains a 6-foot perimeter fence.

4.4 2,000-gallon Aboveground Blending Tank

Area Description - An above ground mixing tank with normal capacity of approximately 2,000 gallons, makes up the solvents/solids dissolving capacity. The 2,000-gallon mixing tank is Underwriter's Laboratory UL approved, and constructed of carbon steel. The dimensions of the tank is 6 feet (maximum outside diameter), by 10 feet high.

The 2,000-gallon mixing tank is used for blending waste materials into fuel products. Drummed solvents are pumped to the mixing tank and blended with compatible solvents and/or compatible solids from the facilities solids operations. Once mixing operations have been completed, the contents of the mixing tank are pumped via overhead piping to the tank farm for transport off-site.

Containment Structures - The tank is situated in the process/storage building which has a continuous sealed concrete floor with no floor drains and 6 inch curbing across the floor in front of all loading dock overhead doors and mandoor.

Area Drainage - Any spillage from the mixing tank would be contained by the building floor and walls and 6-inch doorway curbing. However, in the unlikely event that a spill escapes the building, the spillage would flow by gravity via overland pathways and/or area storm sewers from the site drains to Lincoln Creek via an unnamed ditch and/or the storm sewer system. Visual examination of the unnamed ditch and the storm drain ensures that no spillage is inadvertently discharged into navigatable waters.

Fail Safe Devices - All tanks are equipped with a high level alarm which is integrated with automatic cut-off system for the feed pumps, there by providing additional overflow protection.

Procedures - EOG has procedures in place whereby tank content levels are checked routinely, signs of spills are reported, and material transfer operations are conducted in a safe manner.

Inspections and Records - Records regarding inspections of the above ground mixing tank area and maintenance schedules will be maintained. Responsible staff at EOG will complete the appropriate recording and inspection forms as contained in the Inspection Schedule during each inspection, and will maintain copies for a minimum of 3 years after the date of the inspection. Any amendments or changes to the SPCC Plan will be consistent with inspections and record keeping.

Personnel - It is the responsibility of the Operations Manager to implement the SPCC Plan, maintain the necessary records and properly train employees in oil spill prevention and control. Engineering and management personnel are available and have authority to commit the needed resources for compliance.

Security - Access to the blending tank is limited to select employees and escorted visitors only. The blending tank is located within the process/storage building.

4.5 5,500-gallon Aboveground Storage Tanks

Area Description - Two aboveground storage tanks with normal capacity of approximately 5,500-gallons each (11,000-gallons total), makes up the bulk acid/basic storage capacity. The aboveground tanks are Underwriter's Laboratory (UL) approved, and constructed of carbon steel. The dimensions of each tank is 8 feet (maximum outside diameter), by 15 feet high.

Compatible laboratory pack and/or drum quantities of acids are placed in the acids tank along with compatible dissolved metal wastes. In addition, compatible laboratory pack and drum quantities of basics are placed in the basic tank along with compatible non-organic aqueous wastes. Both the acids and basics tanks are located in the labpack building. Periodically, the tanks are unloaded to tanker trucks by a flexible discharge line located in the tank farm unloading area located adjacent to the 12,000-gallon tank storage area.

All of EOG's acid and basic wastes are transported off-site on an as needed basis. Written tank truck loading and unloading procedures are followed to ensure safe material transfer.

Containment Structures - Each tanks is situated within a lined and coated concrete containment area within the labpack building. Each containment area provides for approximately 5,650 gallons.

Area Drainage - Any spillage from a tank would be contained by the containment area. However, in the unlikely event that a spill escapes the containment area, the spillage would be contained by building walls and floor. If the spillage escapes the building, the spillage would flow by gravity via overland pathways and/or area storm sewers from the site drains to Lincoln Creek via an unnamed ditch and/or the storm sewer system. Visual examination of the unnamed ditch and the storm drain ensures that no spillage is inadvertently discharged into navigatable waters.

Fail-Safe Devices - All tanks are equipped with a high level alarm which is integrated with automatic cut-off system for the feed pumps, there by providing additional overflow protection.

Procedures - EOG shall follow procedures whereby tank levels are checked routinely, signs of spills are reported, and material transfer operations are conducted in a safe manner.

Inspections and Records - Records regarding inspections of the aboveground storage tank area, tank truck loading logs, and maintenance schedules will be maintained. Responsible staff at EOG will complete the appropriate recording and inspection forms as contained in the Inspection Schedule during each inspection, and will maintain copies for a minimum of 3 years after the date of the inspection. Any amendments or changes to the SPCC Plan will be consistent with inspections and record keeping.

Personnel - It is the responsibility of the Operations Manager to implement the SPCC Plan, maintain the necessary records and properly train employees in oil spill prevention and control. Engineering and management personnel are available and have authority to commit the needed resources for compliance.

Security - Access is controlled through the process/storage and lab pack areas. Access is limited to employees and escorted visitors.

4.6 Drum Storage

Area Description - EOG has the capacity to store 1,440 drums of nonhazardous waste in their process/storage building. Within the same layout in the same area EOG has the capacity to store 720 drums of hazardous waste. The proposed addition to the existing building will allow for an additional 832 nonhazardous and 416 hazardous waste containers and the lab pack building will allow for an

additional 145 containers of lap-pack waste. Once EOG is at full operating capacity, the total storage capacity will be 2,272 nonhazardous and 1,281 hazardous waste containers. Hazardous waste drums are not stacked. Nonhazardous waste drums are stacked two high. A three foot aisle space is maintained between the rows of palleted drums and 6 foot aisle space is maintained in main aisle ways.

Containment Structures - The drum storage areas in the storage building and proposed additions have a continuous sealed concrete floor with no floor drains with 6-inch curbing across the floor in front of the loading dock overhead doors and manddoors. The lab pack building contains five separate containment areas for various types of waste. Each containment area can store a maximum of 29 drums and has a continuous sealed concrete floor with 6-inch containment berms. Adequate containment capacity exists within these storage areas.

Area Drainage - Any spillage from the drums would be contained by the sealed, continuous concrete floor, building walls and 6-inch curbing across all doorways leading to the exterior of the building. However, in the unlikely event that a spill escapes the building, the spillage would flow by gravity via overland pathways and/or area storm sewers from the site drains to Lincoln Creek via an unnamed ditch and/or the storm sewer system. Visual examination of the unnamed ditch and the storm drain ensures that no spillage is inadvertently discharged into navigatable waters.

Fail Safe Devices - The drum storage areas are routinely monitored by trained personnel so that any leaks or deteriorating drums would receive immediate response.

Procedures - Spill response and spill retainment procedures are contained in Section 7 of this document. If necessary, EOG will implement the applicable portions of the contingency plan during a spill incident.

Inspections and Records - Records regarding storage area inspections and maintenance are currently maintained by EOG. Inspections and record keeping will be modified to maintain consistency with any amendment or changes to the SPCC Plan.

Personnel - It is the responsibility of the Operations Manager to implement the SPCC Plan, maintain the necessary records and properly train employees in oil spill prevention and control. Engineering

and management personnel are available and have authority to commit the needed resources for compliance.

Security - Access is controlled through the process/storage and lab pack areas. Access is limited to employees and escorted visitors.

Section 5
STAFF TRAINING

EOG ensures that staff are adequately trained to ensure proper operation and maintenance of equipment, and to prevent the discharge of oil. Training procedures are in compliance with applicable pollution control laws, rules, and regulations. EOG has designated the operations manager (Julie Wong) as the person accountable for oil spill prevention and who reports to management. Spill prevention briefings for staff personnel are conducted at regular intervals to ensure adequate understanding of the SPCC Plan. Spill prevention briefings highlight and describe known spill events or failures, malfunctioning equipment, and recently developed spill prevention measures. Documentation of the date when the spill prevention briefings were held, personnel attending, and discussions will be maintained in the facility's SPCC file.

Section 6

SPILL REPORTING AND DOCUMENTATION

The facility Operations Manager is responsible for reporting and documentation procedures. Spills that reach a navigable waterway in harmful quantities as defined by 40 CFR 110.3 are required to be reported under 40 CFR 110.10. EOG will document for its own records all spills or releases regardless of the volume, including those spills or releases which are completely contained within the containment structure. Employees will also be made aware of the need to report any spills of petroleum products via the facility's training program. Reporting and documentation procedures to be followed in the event of a spill are as follows:

- EOG will complete a Notification of Release Form upon being notified that a spill has occurred (see Attachment A-1).
- If it is determined that the spill has reached a waterway in reportable quantities, EOG will proceed with the following reporting procedures:
 - Call the National Response Center (NRC) at 800-424-8802 or the U.S. Coast Guard and report that a spill has occurred. The following additional information will be supplied:
 - time, location, and source of the spill
 - type and quantity of material spilled
 - cause and circumstances of the spill
 - hazards associated with the spill
 - personnel injuries and corrective action planned to be taken
 - name and telephone number of individual reporting the spill
 - any additional pertinent information
 - File a copy of the Notification of Release Form with the Environmental Protection Agency (EPA) at:

U.S. Environmental Protection Agency
230 South Dearborn Street
Mail Code: 5HR-JCK-13
Chicago, IL 60604
312-886-6159
 - Call the State of Wisconsin Division of Emergency Government (608) 266-3232.

- Call the Milwaukee Fire Department at (414) 347-2323 or 911 for fire safety control measures.

The following parties may also be notified, as appropriate:

- Chief Engineer of the Milwaukee Metropolitan Sewage Department.

Section 7

SPILL CLEANUP PROCEDURES

On-site spill cleanup is aimed at recovering as much of the spilled material as possible for recovery, recycling, and/or disposal as quickly as possible. Several techniques are available for on-site cleanup. Choice of a cleanup method shall be determined at the time of the incident, taking into account the extent of the spill. Some cleanup alternatives include the following:

- Using sorbents, which are spill scavengers and cleanup agents, to absorb the spilled product is the most common method for handling spills or residual product left from a major spill. Application of the sorbents can be in the form of direct application where the sorbent is placed directly on the product, or it can be in pillows, large bats, or booms which can absorb a large amount of liquid and make recovery, recycling, and/or disposal easier. Three classes of sorbents are natural products (straw, sawdust, clays, and vermiculite), modified natural products (expanded perlite, cloth rags, charcoal, silicone-coated sawdust, surfactant-treated asbestos), and synthetic products (imbiber beads, imbiber bead blankets, and foam products). When using sorbents, it is necessary to recycle and/or dispose of spent products properly, unless recoverable sorbents are used.

When selecting a sorbent material, important considerations are its capability to absorb all spilled product, its availability in sufficient quantities; and whether or not it is chemically inert and will not react with the spilled product or form toxic or otherwise hazardous substances. For corrosive materials, lime or other neutralizers are practicable.

- Direct suction pumping into appropriate tanks or drums using pumps which are driven by explosion-proof motors or pneumatic operation. Consider applying a blanket of firefighting foam (AFFF) to control vapors.

Section 8
EMERGENCY SPILL EQUIPMENT

EOG maintains certain equipment on-site in order to recover an oil spill on its property. Equipment maintained on-site for use in recovery of spilled materials includes the following:

- Items and/or materials for containment of a spill
 - Squeegees
 - Shovels
 - Brooms
 - Hazorb Absorbent Pillows
 - Absorbent Booms
- Items and/or materials for spill recovery
 - Mops and Pails
 - Sta-Dri
 - Hazorb Absorbent Pillows
- Items to facilitate containment and recovery of a spill
 - Pump with Suction Hose
 - Flashlights

The Operations Manager is responsible for ensuring the availability of appropriate equipment. The emergency spill equipment is located in overpack drums at key point throughout the facility (see Sheets ___ and ___). More equipment may be needed as the Operations Manager identifies other areas of concern at EOG.

Section 9
PLAN CERTIFICATION

This plan was prepared using sound engineering practices. I have examined the facility and this plan, and find that this plan conforms to the guidelines and provisions of 40 CFR 112.

John A. Cimermanic
Signature of Independent
Registered Professional Engineer

9/7/94
Date

RMT, Inc.

E-19697
Registration No.



Management Approval

I am at a management level with authority to commit the resources necessary to implement this plan and hereby approve it.

M.C. Vilione
Signature of Manager

9/7/94
Date

Michael C. Vilione, President
Name and Title

Attachment 1

NOTIFICATION OF RELEASE FORM

NOTIFICATION OF RELEASE

National Response Center: 1-800-424-8802

Wisconsin Division of Emergency Government: 608-266-3232

Date Called:_____ Person Calling:_____

Time Called:_____ Person Contacted:_____

I.D. Reference/Log No.:_____

Location of Release:_____

Chemical Name and Identity:_____

Estimated Quantity of Release:_____

Time and Duration of Release:_____

Immediate Response Measures Taken:_____

Medium or Media Affected (air, soil, water, etc.):_____

Acute/Chronic Health Risks:_____

Precautions Taken Including Evacuations:_____

Contact Person and Telephone Number:_____

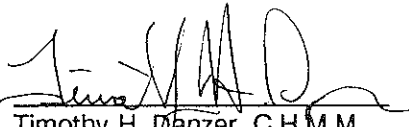
Other Information:_____

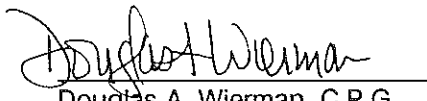
ATTACHMENT 9: CONTINGENCY PLAN

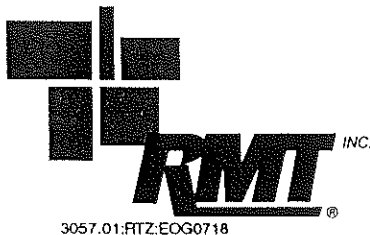
**CONTINGENCY PLAN
EOG DISPOSAL, INC.
MILWAUKEE, WISCONSIN**

Prepared By:
**RMT, INC.
WAUKESHA, WISCONSIN**

SEPTEMBER 1994


Timothy H. Danzer, C.H.M.M.
Project Environmental Scientist


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Section 1 INTRODUCTION

1.1 Background

The purpose of both the existing and proposed facility is to conduct exempt recycling of hazardous waste materials, including combustible waste, waste oil, paint waste, solvent waste, and other organic and inorganic materials. The Waste Analysis Plan (Attachment 5) contains additional information on the types of wastes and where they are stored. The activities conducted at this facility are based on a very simple concept--the re-direction of materials from the waste stream for the purpose of beneficial reuse whenever possible. The materials received at this facility are primarily generated by commercial, institutional and industrial companies that do not generate bulk quantities. Therefore, the function performed by this facility is primarily the bulking and transfer of hazardous and nonhazardous wastes in order to gain access to secondary markets. Some of the organic materials are recycled by EOG for re-refining or energy recovery as a fuel for industrial furnaces, or some are recycled by a separate off-site licensed facility. Both liquid and solid materials are processed at this location. The facility will also accept labpacks for repackaging and/or bulking to allow for the cost effective re-direction of these materials for the purpose of beneficial use.

1.2 Purpose and Scope

The information contained herein is submitted for the EOG Disposal, Inc. (EOG), of Milwaukee, Wisconsin, in accordance with the requirements for a contingency plan, as contained in Chapters NR 630.21 and 630.22(1) and (2), Wisconsin Administrative Code. The purpose of this contingency plan is to prevent or minimize hazards to human health or the environment from fires, explosions, or unplanned releases of hazardous waste or hazardous waste constituents to air, land, or water. The provisions of this plan shall be carried out immediately in the event of a fire, explosion, or release of hazardous waste or waste constituents which could threaten human health or the environment.

This contingency plan shall also be implemented whenever hazardous conditions exist. Hazardous conditions, other than an actual incident, refer to any situation involving the imminent, or probable spillage, leakage, or release of a hazardous substance onto land, water, or the atmosphere that could create an immediate or potential danger to the public health or safety because of its quantity, strength, and toxicity; its mobility in the environment; and its persistence. Routine cleanup operations shall be performed by operating personnel without implementing this contingency plan.

Section 2 IMPLEMENTATION CRITERIA

The decision to implement the contingency plan depends upon whether an imminent or actual incident could threaten human health or the environment. The purpose of this section is to guide the emergency coordinators, through decision-making criteria, in making this decision. Emergencies may occur at any time as a result of natural forces, trespassing, accidents, hazardous substance spills, or other situations that disrupt essential operations. Table 1 summarizes the type and nature of emergency situations that would require implementation of the contingency plan. If any of the criteria listed in Table 1 occur, then the contingency plan shall be implemented. If a site emergency is initiated, the emergency coordinator shall follow the procedures contained herein.

TABLE 1	
CONTINGENCY PLAN IMPLEMENTATION CRITERIA	
Emergency Type	Emergency Nature
Fire and/or Explosion	<ul style="list-style-type: none"> • A fire causes the release of toxic fumes, particulates, or smoke. • The fire is sufficiently large or uncontrolled to warrant outside assistance. • The fire could possible spread to off-site areas. • Use of water or water and chemical fire suppressant could result in contaminated runoff reaching groundwater or the properties of others. • Imminent danger exists of an explosion that could cause a safety hazard because of flying fragments or shock waves. • An imminent danger of explosion exists. • An explosion has occurred.
Spills or Material Release	<ul style="list-style-type: none"> • The spill could release flammable liquids or vapors in sufficient quantities to cause a fire or gas explosion hazard. • The spill could release toxic particulates, liquids, or fumes in sufficient quantities or in a manner that is hazardous to human health. • The spill increases the potential for groundwater contamination. • The spill cannot be contained on-site and therefore results in off-site soil contamination and/or ground or surface water pollution.
Natural Disaster	<ul style="list-style-type: none"> • A tornado affecting the facility has occurred. • An earthquake affecting the facility has occurred. • Severe thunderstorms have occurred and caused release of hazardous wastes.
Civil Unrest	<ul style="list-style-type: none"> • The facility is involved in a violent labor strike resulting in damage to the hazardous waste management facility. • The facility's security system has been breached by individuals intent on sabotage.

Section 3 COORDINATION OF EMERGENCY SERVICES

3.1 Emergency Coordinator

A list of Emergency Coordinators is provided in Table 2. In the event of an emergency, the Emergency Coordinator has the authority to commit resources to an emergency. In accordance with s. NR 630.22(1)(d), Wisconsin Administrative Code, at least one person with the responsibility of coordinating all emergency response measures will be present when the facility is in operation. When the facility is not in operation, a facility emergency coordinator will be present or on call and available to respond to an emergency by reaching the facility in a short period of time. The Emergency Coordinator (or designee) shall perform the following tasks:

- Assess extent of emergency.
- Contact appropriate emergency support agencies if needed.
- Designate someone in charge at incident area to temporarily supervise immediate control action, radio report to coordinator for an update on conditions, and notify all personnel.
- Take precautions to prevent spreading of fire or other emergency conditions to other hazardous waste or waste disposal areas.
- Evacuate non-EOG personnel and non-essential EOG personnel from incident area particularly during operating hours.
- Assemble all personnel at a designated area for instructions and roll call. Direct company personnel in responding to fire or explosion, if appropriate, and wait for outside emergency personnel and assist in their efforts.
- If appropriate, prepare self-contained breathing apparatus, and distribute.
- Prevent additional traffic from entering incident area.
- Clear road(s) for emergency vehicles and equipment.
- Contact Chemical Coordinator, or check waste inventory log located in the laboratory for information to identify the nature of wastes in the incident area, and to determine potential hazards, such as toxic, irritating, or asphyxiating gases generated as a result of fire or explosion.
- Determine the need to evacuate the site based on evaluation of the following:

- The areal extent of the incident
- The nature of wastes involved, especially including the potential for generation of hazardous gases
- An estimate of the time required and equipment needed to bring the incident under control.
- Any other special conditions or factors that may have a bearing on the severity of the incident.
- In the event of fire, consider smoke visibility or toxic fume hazard in off-site areas, and notify Milwaukee County Fire Department personnel for action, if necessary.
- For occurrences requiring local traffic control, contact the Milwaukee County Sheriff's Department to coordinate evacuation activities, if necessary.
- If the emergency involves a spill or release, contact the State of Wisconsin Division of Emergency Government Spill Hotline (608-266-3232).
- If the nature of the spill is appropriate, contact the National Response Center (800-424-8802) and report the following:
 - Name and telephone number of the reporter
 - Name and address of the incident
 - Time and type of incident
 - Name and quantity of material involved, to the extent known
 - The extent of injuries, if any
 - Possible hazards to human health, or the environment, outside the facility
- Immediately after the incident, make an assessment to determine the need for recycling, recovery, and/or disposal of recovered waste, contaminated soil or surface waters, or any other material that results from a release, fire, or explosion at the facility (assume materials are hazardous). Obtain a sample of wastes involved in the incident for possible chemical analysis so that the cause of the incident can be definitely determined.
- The emergency coordinator shall evaluate the nature of materials (such as fire suppressants, neutralizing agents, waste residuals) in the affected area of the facility to determine if special cleanup efforts must be initiated before operation is resumed. The evaluation shall include a determination as to whether the released materials would be incompatible with incoming wastes. If special fire suppressants have been used, the emergency coordinator (or site chemist) shall consult with the manufacturer or check the product label (if adequately detailed) to determine any potential incompatibility.

TABLE 2

LISTING OF EMERGENCY COORDINATORS

Priority of Notification	Title	Employee Name	Business Phone Number	Pager Number PIN Number	Home Phone Number
1	Primary Emergency Coordinator	Martin W. Schmit	414-353-1156	1-800-759-7243 PIN# 2952504	non-responsive
2	Alternate Emergency Coordinators	Michael C. Vllione	414-781-7494	1-800-759-7243 PIN# 5131332	
		Henry J. Krier	414-353-1156	1-800-759-7243 PIN# 8839223	
3	24 Hour Emergency Line	N/A	414-237-0724	414-237-0724	

NOTE:

One emergency coordinator will always be available, either on-site or on call 24 hours a day. In the event that more than one emergency coordinator is on-site at the time of an emergency, the chain of command will follow the priority of notification.

- The Emergency Coordinator shall ensure that all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.
- The owner or operator shall notify the appropriate state and local authorities, that the facility is in compliance with this Section before operations are resumed in the affected area(s) of the facility.
- The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the Contingency Plan. Within 15 days after the incident, a written report shall be submitted on the incident to the Wisconsin Department of Natural Resources Director. The report shall include the following:
 - Name, address, and telephone number of the owner or operator.
 - Name, address, and telephone number of the facility.
 - Date, time, and type of incident (e.g., fire, explosion).
 - Name and quantity of material(s) involved.
 - The extent of injuries, if any.
 - An assessment of actual or potential hazards to human health or the environment, where this is applicable.
 - Estimated quantity and disposition of recovered material that resulted from the incident.
 - A narrative describing the known or suspected causes of the incident and a statement describing the measures taken to investigate the cause. The narrative shall also describe any necessary measures which have been or shall be taken to prevent incidents in the future.
 - Any amendments to the contingency plan.

3.2 Emergency Response Team

The Emergency Response Team is established at the facility to provide incident control and remediation during emergency situations. The team listed in Table 3 consists of an Emergency Coordinator plus industrial hygiene, health and safety, and other plant personnel who are trained for fire, chemical, first-aid, and maintenance assistance. Table 3 identifies Emergency Response Team personnel.

TABLE 3

EMERGENCY RESPONSE TEAM

Team Members	Name	Title
Emergency Response Team Chief	Martin W. Schmit	Plant Manager
Emergency Response Team Members	Michael C. Vllione	President
	Henry J. Krier	Vice President

3.3 Fire Brigade

The facility has a fire brigade who acts as a first line of defense against fire and explosion. The Fire Brigade, listed in Table 4, is organized and trained to respond to incipient fires (those in the early stages of development that can be successfully fought using hand extinguishers or hoselines) and more serious fires. Fires that present life-threatening situations shall be fought with the help of outside fire companies.

3.4 Coordination Agreements with Local Authorities

The facility maintains close ties with local police and fire departments and health care facilities. Refer to Table 5 for a list of local emergency contacts. Numerous contacts have been made and are maintained throughout the year by EOG, such as emergency planning, fire prevention, and security personnel with various outside agencies. Copies of the Contingency Plan have been supplied to the appropriate local authorities to familiarize them with operations and emergency procedures (Appendix C). Any amendments to the Contingency Plan will also be supplied to the appropriate local authorities to familiarize them with any additional operations and emergency procedures.

Fire Department

The City of Milwaukee Fire Department personnel are offered annual inspection and familiarization tours of the EOG facilities, and shall work closely with EOG Fire Brigade personnel in establishing and maintaining effective prevention and protection programs. The interaction shall include identification of the properties of hazardous waste handled at the facility, the associated hazards, and the fire control techniques, as well as a review of the contingency plan.

Police Department

The EOG Emergency Coordinator shall interact with the City of Milwaukee Police Department and the Milwaukee County Sheriff to establish effective working relationships in dealing with potential emergency situations.

Medical Services

The EOG Emergency Staff shall maintain close contact with ambulance squads and emergency medical personnel to ensure a thorough understanding of site hazards, building layouts, and emergency medical procedures. Diagnosis and treatment procedures for chemicals (including hazardous wastes) at EOG shall be maintained at the site.

TABLE 4

FIRE BRIGADE PERSONNEL

Fire Brigade	Name	Title
Fire Brigade Chief	Martin W. Schmit	Plant Manager
Fire Brigade Members	Julie Wong	Operations Manager
	Joe Baumann	Approvals Coordinator

TABLE 5	
EMERGENCY RESPONSE CONTACTS AND TELEPHONE NUMBERS	
<i>Local Emergency Response Contacts</i>	
City of Milwaukee Police Department	911
City of Milwaukee Fire Department	911
Milwaukee County Sheriff	911
State of Wisconsin Division of Emergency Government	608-266-3232
State Patrol	414-785-4710
EMS	911
<i>Local Hospital Emergency Numbers</i>	
St. Michaels Hospital	414-527-8175

Section 4
EMERGENCY RESPONSE PROCEDURES

4.1 Notification

Should an emergency situation arise, the Emergency Coordinator, or the designee, shall be notified immediately. The Emergency Coordinator shall then contact the Safety Officer and the Fire Brigade Chief as required. If any employee in the active hazardous waste disposal area or waste reception area encounters an emergency situation that they believe is a threat to the health or safety of themselves or others, the individual employee is authorized to alert others to the problem by radio or voice communication and to evacuate the area immediately.

4.2 General Emergency Action Procedure

During an emergency, the Emergency Coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous wastes at the facility. These measures include, where applicable, stopping facility operations, collecting and containing released waste, and removing or isolating containers. If the facility stops operations in response to an emergency, the Emergency Coordinator or designee shall then monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, as appropriate. The specific emergency action procedures followed are to control potential releases to air, soil, and water.

4.3 Fire/Explosion Action Procedure

Upon discovery of a fire or explosion at or outside of the EOG facility, the Emergency Coordinator shall contact the necessary personnel to fight the fire. This may include the use of the Fire Brigade, who are trained in the proper method of fire fighting, and other Emergency Response Team personnel, who are trained in the proper methods of fire fighting. All untrained personnel shall be required to leave the area. In addition, the Emergency Coordinator shall direct all cleanup operations, determine the level of personnel protective equipment needed, and decide on the appropriate cleanup materials.

Regardless of the location of the fire/explosion, the Emergency Coordinator is responsible for the following:

- Determining a life-threatening potential
- Determining a property-threatening potential
- Determining an environmental impact potential

Depending on the availability of data, these assessments are accomplished through careful review of waste shipping manifests, detailed chemical analysis data, or "fingerprint" chemical analysis data.

On-site firefighting equipment that will be used to control fires/explosions at the EOG facility shall include the following:

- Fire blankets
- Hand-held fire extinguishers located throughout the facility
- Portable fire extinguishers
- Automatic Aqueous Film Forming Foam (AFFF) fire suppression system

Upon discovery of a fire/explosion, individuals shall initiate the fire/explosion action procedure as described below.

FIRE/EXPLOSION ACTION PROCEDURE

1. Notify Emergency Coordinator or designee.

Emergency Coordinator: Martin W. Schmit
Business Telephone - (414) 353-1156
non-responsive [REDACTED]

The Emergency Coordinator has the authority and responsibility to take all reasonable measures to ensure that fires, explosions and releases with the potential to cause a fire or explosion do not occur, recur, or spread to other wastes at the facility. Upon discovery of any fire or explosion at or outside the facility, the Emergency Coordinator will immediately, via telephone, contact the City of Milwaukee Fire Department, by dialing 911. He will inform the Fire Department of the current situation, including the need for ambulances or other emergency equipment, should any injuries have occurred as a result of the fire or explosion. The Emergency Coordinator will designate a person to wait at

the street entrance to the facility to direct emergency personnel to area of the incident when they arrive.

The Emergency Coordinator or designee then subsequently notify the EOG Fire Brigade and Emergency Response Team.

2. Control access to area. Clear all nonessential personnel from area.
3. Extinguish fire with hand-held fire extinguishers, if possible, or take other immediate action to mitigate the emergency until the local Fire Department arrives.
4. Take all reasonable measures necessary to ensure that subsequent fires, explosions, or releases do not occur or spread to other areas. These measures may include, but are not limited to, the possible removal of unaffected drums of waste from the area and dowsing adjacent areas with water.
5. In response to a fire or explosion that may release hazardous materials, the Emergency Coordinator shall direct activities to monitor for leaks, pressure build-up, gas generation, or for ruptured pipes or valves or other equipment, as appropriate.
6. If a fire or explosion causes the release of hazardous materials, the appropriate action procedure for spilled or released material shall be followed, as described in Subsection 4.5.
7. The Emergency Coordinator shall deploy additional personnel and equipment as required.
8. The Emergency Coordinator shall document the event.

4.4 Fire/Explosion Residual Cleanup Procedure

Cleanup of fire residuals involving hazardous wastes is aimed at collecting as much of the hazardous waste as possible for recycling, recovery, and/or disposal as quickly as possible. Several techniques are available for on-site cleanup, and their use shall be determined at the time of the incident, taking into account the extent of the cleanup. Procedures may require the use of sorbents, portable pumps, etc. Similarly, the type of personal protective equipment depends upon the type of material(s) involved.

All waste generated from post-fire cleanups involving hazardous waste shall be placed in containers, sampled, and disposed accordingly. Any equipment used in cleaning fire residuals involving hazardous waste shall be decontaminated prior to use elsewhere. Any collectable liquid generated from decontamination procedures shall be tested and drummed for proper disposal.

Any residual liquid remaining from a fire at the facility shall be cleaned up as described in the spill or material release section.

4.5 Spill or Material Release Action Procedure

In the event of an emergency involving a hazardous waste spill, the following general procedure shall be used for a rapid and safe response and to maintain control of the situation.

- If an employee discovers a hazardous waste spill or a vapor release, the employee shall immediately notify the area supervisor.
- The area supervisor shall notify the Emergency Coordinator or designee.

When a spill or release occurs at the EOG facility, the Emergency Coordinator shall contact the necessary personnel to contain and clean up the spill or release. Team members shall be responsible for controlling the cause of the incident and for neutralizing or otherwise rendering the waste or waste constituents harmless so that others may enter the area to make repairs. Team members shall also be well trained in spill control methods and equipment. This may include the use of the Fire Brigade and the Emergency Response Team who are properly trained in spill cleanup procedures. Maintenance personnel and other specialized employees not on the Emergency Response Team may assist in the cleanup after the emergency situation has subsided. In addition, the Emergency Coordinator shall direct all cleanup operations, determine the level of personal protective equipment needed, and decide on the appropriate cleanup materials and procedures.

Regardless of the incident location on the property, the Emergency Coordinator shall be responsible for the following:

- Identifying the spilled material
- Estimating the quantity of material spilled
- Determining the life-threatening potential
- Determining the property-threatening potential
- Determining the environmental impact potential

Depending on the availability of data, these assessments shall be accomplished through careful review of waste shipping manifests, detailed chemical analysis data, or "fingerprint" chemical analysis data. If appropriate, chemical analysis shall be performed on the spilled/ released material.

Upon discovery of a spill/release, individuals shall initiate the action procedure as described below.

SPILL/RELEASE ACTION PROCEDURE

1. Report the incident to the Emergency Coordinator or designee.

Emergency Coordinator: Martin W. Schmit
Business Telephone - (414) 353-1156
non-responsive [REDACTED]

The Emergency Coordinator or designee shall subsequently notify the Emergency Response Team.

2. Protect personnel.

Keep non-essential personnel away from area of spill; evacuate if necessary. Remove unaffected items from area only if ignition does not present a fire hazard.

3. Confine danger.

Stop spill at source or contain, if possible. Shut off or cap valves to contain as much run-off and spill as possible. If a truck is affected, every effort shall be made to prevent the material from entering sewers. This shall be accomplished by damming, diking, or channeling with sand, dirt, or spill pillows. If a leak is uncontrollable in a tanker, the remaining contents of the tanker shall be transferred to appropriate storage tanks or drums.

4. Eliminate ignition sources.

Eliminate all sources of heat, open flame, sparks, and friction. Use non-sparking tools for spill cleanup. Refer to the appropriate action procedure if a significant fire or explosion risk exists.

5. Spill Response.

The Emergency Response Team shall report to the scene and address the spill. Appropriate protective equipment and respiratory protection shall be donned, and contaminant levels and spill neutralization needs shall be assessed. Techniques available for spill cleanup are described in Subsection 4.8.

6. Handle wastes.

Properly package and label spilled materials absorbed by sorbents. Remove spilled materials and rinse water accumulated in containment areas via a portable vacuum unit. The contents shall be discharged to the appropriate storage tank or drums. Absorb residual materials in the containment area with the appropriate sorbent; properly package and label materials.

7. Verify cleanup.

At the completion of the cleanup effort, the Emergency Coordinator shall verify complete spill collection and neutralization as well as the absence of hazardous airborne contaminants.

8. Decontaminate equipment.

Decontaminate spill response materials, and return them to their proper locations. Adjust the inventory of the spilled materials to account for materials expended in the spill cleanup.

9. Report spill.

After achieving normal conditions, report the following to the appropriate agencies:

- EOG Incident Report (Appendix A)
- EOG Incident Addendum Report (Appendix B)

4.6 Spill or Material Release Cleanup Procedure

On-site spill cleanup is aimed at recovering as much of the spilled material as possible for recovery, recycling, and/or disposal as quickly as possible. Several techniques are available for on-site cleanup. Choice of a cleanup method shall be determined at the time of the incident, taking into account the extent of the spill. Some cleanup alternatives include the following:

- Using sorbents, which are spill scavengers and cleanup agents, to absorb the spilled product is the most common method for handling spills or residual product left from a major spill. Application of the sorbents can be in the form of direct application where the sorbent is placed directly on the product, or it can be in pillows, large bats, or booms which can absorb a large amount of liquid and make recovery, recycling, and/or disposal easier. Three classes of sorbents are natural products (straw, sawdust, clays, and vermiculite), modified natural products (expanded perlite, cloth rags, charcoal, silicone-coated sawdust, surfactant-treated asbestos), and synthetic products (imbiber beads, imbiber bead blankets, and foam products). When using sorbents, it is necessary to recycle and/or dispose of spent products properly, unless recoverable sorbents are used.

When selecting a sorbent material, important considerations are its capability to absorb all spilled product, its availability in sufficient quantities; and whether or not it is chemically

inert and will not react with the spilled product to form toxic or otherwise hazardous substances. For corrosive materials, lime or other neutralizers are practicable.

- Direct suction pumping into appropriate tanks or drums using pumps which are driven by explosion-proof motors or pneumatic operation. Consider applying a blanket of firefighting foam (AFFF) to control vapors.

4.7 Civil Unrest Action Procedure

This procedure shall be followed should the EOG facility be subject to civil disturbance. The Emergency Coordinator shall initiate the following actions:

- Call security to notify them of possible disturbances. If necessary, notify the facility General Manager who may call an immediate conference to determine an appropriate plan of action.
- If necessary, issue instructions to secure all entrances with security officers or managers to control access or egress from the buildings by either demonstrators or EOG employees.
- If necessary, the Security Coordinator shall notify local law enforcement agencies, but they should be summoned to take action only as a last resort. An agreement has been made as to the conditions under which outside authorities are summoned, and EOG management is aware of the planned police action.
- If necessary, make every reasonable attempt to have the demonstrators approached by an EOG manager (with due regard for the manager's safety) and inform them that EOG does not permit such activity on its premises, and in a restrained and courteous manner, request that they leave.
- If necessary, prepare a restraining order as soon as possible.

4.8 Natural Disaster Action Procedure

This procedure shall be followed in the event of an emergency caused by severe weather, such as tornadoes and high-intensity thunderstorms, earthquakes, or flooding.

The Emergency Coordinator shall direct and control the following remedial actions if they can be accomplished without unduly endangering the lives of EOG personnel:

- Visually inspect area to ascertain structural integrity.
- Close windows and doors.
- Instruct employees to proceed to designated safety areas.

Even in the event of just a tornado warning, this portion of the plan shall be implemented.

4.9 Storage and Treatment of Recovered Materials

Immediately after an emergency, the Emergency Coordinator shall arrange for the analysis and characterization of representative samples of all recovered wastes, contaminated soils, and waters. Arrangements for any necessary recycling, treatment, or disposal shall be completed within 90 days of the conclusion of the emergency. Accumulated materials shall be containerized to the extent practicable for transportation. If large quantities of a hazardous waste are generated during the emergency cleanup operations, bulk trucks shall be used to transport this waste as it is pumped, or made ready for storage, recycling, treatment, or disposal.

4.10 Incompatible Wastes

The Emergency Coordinator shall ensure that wastes that may be incompatible with released materials are isolated from the spill area. Isolation shall be accomplished by moving the waste to other accumulation areas, or by constructing dikes, berms, or ditches as appropriate. Wastes that are potentially incompatible with the released material shall not be treated, stored, or accumulated in the affected area until cleanup procedures are complete. Concurrently, the Emergency Coordinator shall ensure that released materials are not placed in containers or tanks that previously held materials that may be incompatible with the released material unless adequate decontamination has occurred.

Section 5 EMERGENCY EQUIPMENT

All emergency equipment is kept at the facility in an easily accessible location. Table 6 provides a list of emergency and decontamination equipment along with a list of places where it can be found at the facility. Attachment 15, Sheets 16, 17 and 18 show the location of safety and emergency equipment in a layout of the facility. Table 7 outlines personal protective equipment which is used by facility personnel.

After an emergency event, or as needed during the emergency event, all emergency equipment and supplies listed in Tables 6 and 7 shall be decontaminated or replaced. All safety equipment shall be inspected and evaluated for readiness before operations are resumed in the affected areas.

Emergency spill control equipment is located in an easily accessible area within the building. This equipment includes the following:

1. Bags of clay and vermiculite ("Speedi-Dry")
2. Sand bags
3. Spill pillows
4. Shovels
5. Push brooms
6. Long-handled squeegees
7. Fire extinguishers
8. Pipe balloon
9. Portable liquid vacuum units
10. Empty, 55-gallon drums
11. Sets of non-sparking tools
12. Sorbent boom
13. Personal protective equipment (clothing, boots, gloves)

TABLE 6		
EMERGENCY AND DECONTAMINATION EQUIPMENT		
Type of Equipment	Location	Use
Hand-held fire extinguishers	Warehouse entrances and exists.	To put out a larger than 3-foot-diameter fire and easily moved
Eye wash	Entrance to the warehouse and labpack building. Restrooms.	To flush splashed materials from eyes or face
Safety showers	Entrance to the warehouse and labpack building. Restrooms.	To wash off material that may be splashed on an employee
Hand-held air horn	All processing stations throughout the warehouse and labpack building	To sound alarm for emergencies
First aid stations	Laboratory, warehouse and labpack building	To handle non-serious injuries
Alarm actuators	All entrances and exits throughout the warehouse and labpack building	For security and for emergencies
Internal telephone communications	Warehouse and labpack building walls	To notify and instruct in the event of an emergency
Two-way radios	All areas of the warehouse and labpack building	To notify and instruct in the case of an emergency
Zorbal, sand, and/or other absorbent materials	Outside of the laboratory and throughout the warehouse and labpack building	To contain and cleanup spilled materials
Fire blankets	Outside the laboratory and throughout the warehouse and labpack building	To control and/or extinguish fires or put out flames on personnel
Emergency stretchers	Outside the laboratory and the office in the labpack building	To remove injured personnel

TABLE 7		
PERSONAL PROTECTIVE EQUIPMENT		
Type of Equipment	Location	Use
Five-Minute emergency air packs	Throughout the warehouse and labpack building	To supply 5 minutes of air for emergency escapes
Self contained breathing apparatus (air pack)	On the supply shelves in the warehouse and in the office of the labpack building	For emergencies or for confined-space work. Will supply 30 minutes of air
Organic vapor air filter respirators	Throughout the warehouse and labpack building	To minimize employee exposure
Safety glasses	Laboratory and labpack building	To protect the eyes
Safety goggles	Laboratory and labpack building	To protect the eyes
Safety boots	Laboratory and labpack building	To protect the feet
Safety gloves	Laboratory and labpack building	To protect the hands
Tyvek® coveralls	Laboratory and labpack building	To protect the body
Uniforms	Laboratory and labpack building	To protect the body

Section 6

BUILDING EVACUATION PLAN AND EVACUATION DRILL PROGRAM

6.1 Evacuation Plan

In the event of a facility emergency, all EOG personnel (with the exception of the Fire Brigade or Emergency Response crew members as required) shall evacuate the site. A general site evacuation shall be announced by activating the alarm system (i.e., air horn). Attachment 8, Section 3 contains additional information on the communication systems and thier locations. Further instruction shall be provided at the time of evacuation by the appropriate supervisory staff.

The evacuation routes for the existing EOG facility are posted throughout the facility and illustrated on Figure 1. The evacuation routes for the proposed facility will be posted throughout the facility and is illustrated on Figure 2. The drawings show the primary and alternate routes by which to leave the site. Personnel at the site who are to be evacuated shall leave by the primary route unless the emergency situation is along that route.

6.2 Evacuation Drill Program

Evacuation drills shall be conducted annually and shall be coordinated by the Emergency Coordinator in conjunction with facility managers. A critique team shall observe each drill; summary reports shall be given to Operations Manager for analysis and corrective actions.

The drills provide valuable information about the site's evacuation capability and give managers a chance to test evacuation procedures under controlled conditions. Based on the outcome of the drills, managers shall adjust and improve department emergency procedures as needed.

Department managers shall carry out the following during the planning and action stages of an evacuation drill, and during actual evacuations in emergency situations:

1. Planning Stage.
 - Ensure that all employees fully understand all aspects of the department evacuation plan.
 - Establish primary (closest exit) and alternate evacuation routes and assembly points; include same in the department emergency plan folder.

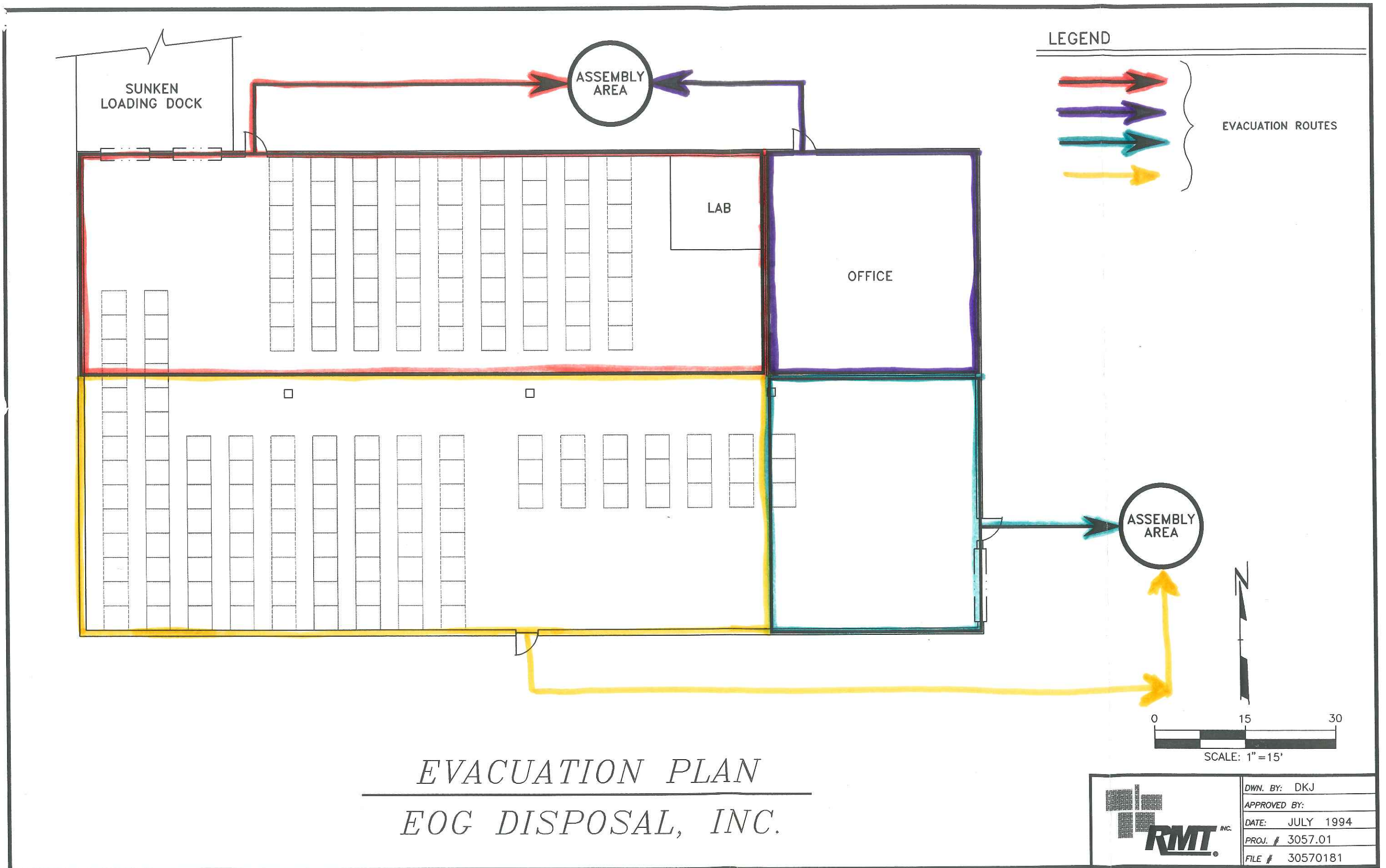
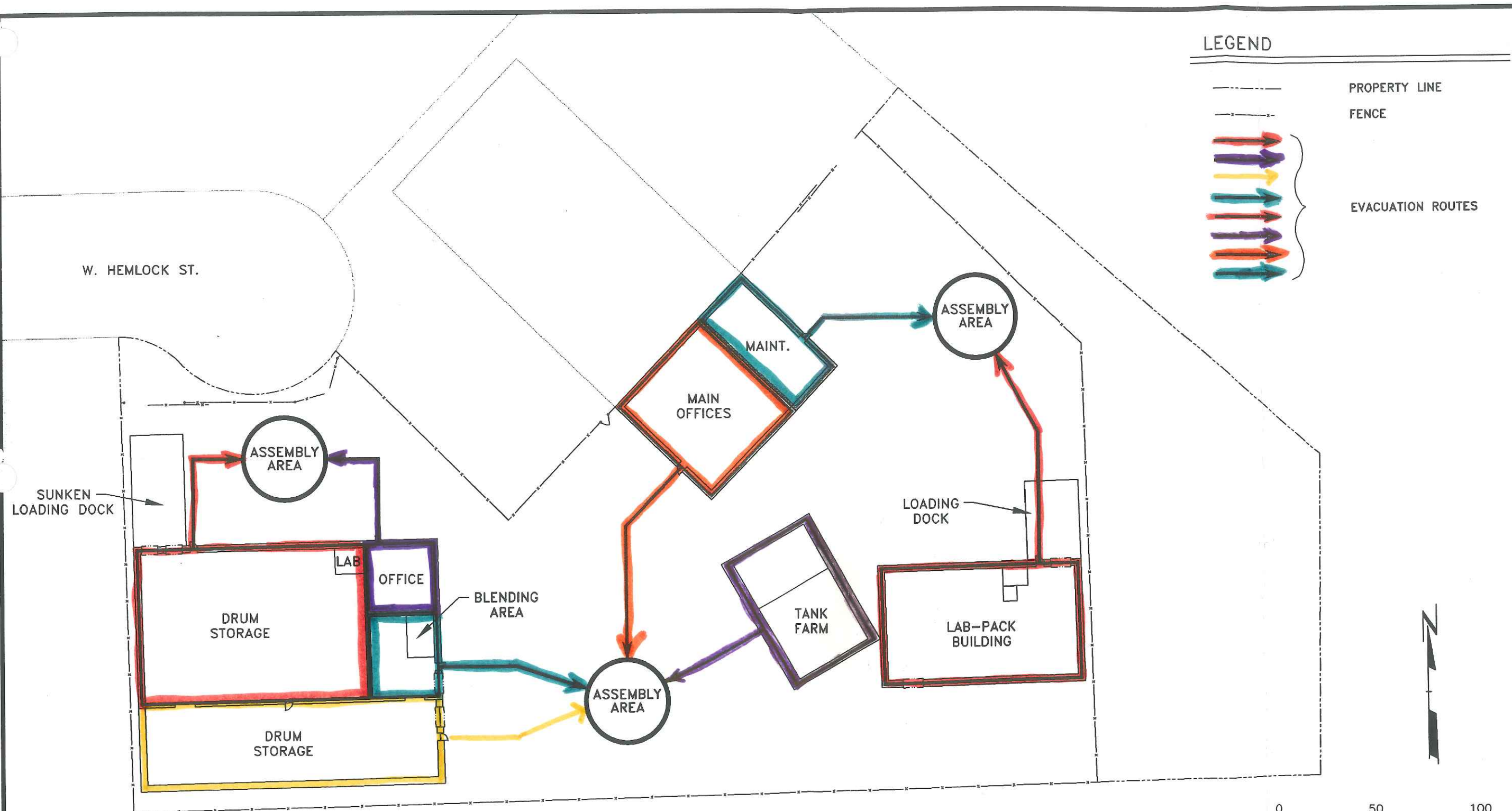


FIGURE 1



PROPOSED EVACUATION PLAN

EOG DISPOSAL, INC.

	DWN. BY: DKJ
	APPROVED BY:
	DATE: JULY 1994
	PROJ. # 3057.01
	FILE # 30570182

FIGURE 2

- Appoint a department evacuation leader and alternate.
 - Assign employees to assist the handicapped, if applicable.
 - Compile shutdown procedures, if applicable.
 - Advise employees to take with them their personal belongings, such as purses, briefcases, outerwear, and car keys, during the drill.
2. Action Stage.
- Assume responsibility for all personnel (including guests, visitors, contractors, etc.) in the work area, and advise them during an evacuation that they must accompany other department employees to the assembly area.
 - Ensure that the evacuation leader or alternate checks restrooms, locker rooms, break rooms, conference rooms, etc., in proximity to the department.
 - Ensure that all personnel in or near the department area evacuate by the primary or alternate exit route. Contractors shall also participate in the drills.

6.3 Shutdown Procedures

Managers shall assign employees in advance to be responsible for shutdown procedures, where necessary. To safely shut down a department area, designated employee(s) shall do the following:

- Switch off all operating electrical equipment, unless shutting it off damages the equipment and leaving it running will not worsen the emergency situation.
- Return chemicals in use to original containers, if applicable, and close or cover open containers.
- Shut down supplied gases and chemicals, if practical, by turning off at the last rigid pipe connection in the department.

When equipment shutdown might cause serious production problems or damage equipment, managers are allowed to assign certain employees to remain in the building and not participate in the drills. Such drill exemptions shall be established in advance with that employee before the drill takes place, but those employees shall fully understand the evacuation procedures and be ready to evacuate under actual emergency situations. Drill exemptions shall be kept to an absolute minimum.

Section 7
REQUIRED REPORTS

EOG shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days, EOG shall submit a written report to the permitting authorities. The report shall include the following:

- Name, address, and telephone number of the owner or operator.
- Name, address, and telephone number of the facility.
- Date, time, and type of incident.
- Name and quantity of material(s) involved.
- The extent of injuries, if any.
- An assessment of actual or potential hazards to human health or the environment, where applicable.
- An estimate of the quantity and disposition of recovered material that resulted from the incident.
- A narrative describing the known or suspected causes of the incident and a statement describing the measures taken to investigate the cause. The narrative shall also describe any necessary measures which have been, or shall be, taken to prevent incidents in the future.
- Any amendments to the contingency plan.

Section 8
CONTINGENCY PLAN AMENDMENTS

This contingency plan shall be amended whenever the following occur:

- The facility permit is revised.
- Experience with a real emergency dictates a change in the plan if needed.
- The facility changes its design, construction, operation, maintenance, or other circumstances in a way that significantly changes the potential for fires, explosions, or releases of wastes or waste constituents, or changes the response necessary in an emergency.
- The list of emergency equipment changes significantly.
- Personnel changes are made to the roles of Emergency Coordinator, Emergency Response Team Chief, and Fire Brigade Chief. In addition, EOG shall conduct quarterly reviews of the lists of members for the Emergency Response Team and Fire Brigade, and shall revise as necessary.

APPENDIX A
INCIDENT REPORT

EOG INCIDENT REPORT

Incident Log No. _____

1. Site/location of incident _____

2. Date _____ Time _____ Duration _____
3. Description of incident _____

4. Amount & type of hazardous chemical substance(s) released:

EOG Waste Approval No. (if applicable): _____
5. Equipment involved: Tank _____ Drum _____ Small Container _____
Tanker _____ Truck _____ Pump _____ Pipe _____ Valve _____ Flange _____
Other Fitting _____ Tunnel _____ Trench _____ Sump _____ Hose _____
Transportation Terminal _____ Other _____
6. Cause of incident:
Mechanical/electrical failure _____
Operator error _____
Procedural failure _____
Contractor-caused incident _____
Incident beyond EOG control _____
Act of God _____
Instrumentation _____
Other _____
7. Hazardous chemical substance(s) released to: Air _____
Water _____ Land _____ Groundwater _____
Bldg Floor _____ Secondary containment _____
Other _____
Air/stack identification _____
Water/describe receptor (e.g., outfall, sewer, stream) _____
Soil/depth to groundwater _____
8. Estimate area (e.g., sq. ft., acres) affected: _____
9. Hazardous chemical substances released beyond EOG property boundary, if any: _____
10. Agencies notified (contact, time, date, by whom):
Wisconsin Division of Emergency Government _____
WDNR _____
Milwaukee Police Department _____
Milwaukee Fire Department _____
Other _____

EOG INCIDENT REPORT

11. Agencies' responses/inspections (name, time, date, comments): _____

12. List the materials released in quantities that exceed the reportable quantities of 40 CFR Part 302 (CERCLA hazardous substances) or 40 CFR Part 100 (oil): _____

13. List the materials released in quantities that exceed state reportable quantity levels: _____

14. Immediate corrective action taken: _____

a) Contractor: _____
b) Amount of waste collected for disposal: _____
c) Method/vendor/location for waste disposal: _____

15. Incident damage (describe):
a) Personal injuries: _____
b) Environmental damage/permit excursion(s): _____
c) Property damage: _____
16. Preventive measures: _____
17. Reported to State of Wisconsin by:
Name/Title: _____
Dept.: _____ Phone number: _____
Time: _____ Time of State of Wisconsin response _____
State of Wisconsin spill notification line - (608)266-3232
18. Additional Comments: _____

Submit report with site map denoting incident to:

1. Facility director, file.
2. Responsible operating unit and/or environmental coordinator.

APPENDIX B
INCIDENT ADDENDUM REPORT

EOG INCIDENT ADDENDUM REPORT

Incident Log No. _____

1. Site/location of incident _____

2. Description of incident _____

3. Cause of incident:
Operator error _____
Design flaw _____
Procedural failure _____
Mechanical/electrical failure _____
Material/structural failure _____
Contractor-caused incident _____
Incident beyond EOG control _____
Contractual omission _____
Act of God _____
Other _____
4. System Description:
Age _____
Secondary containment _____
5. Activity occurring at time of incident:
Construction _____
Manufacturing _____
Utilities operations _____
Maintenance _____ Building cleaning _____
Load/Unload _____ Other _____

6. Results of incident (permit excursions, etc): _____

7. Preventive measures: _____

8. Site internal report: _____
9. Sampling and test results (attach lab report) _____

10. Report to agencies _____
11. Correspondence from agencies _____

Return report with applicable attachments to:

Director, Environmental Programs

Appendix C
LOCAL AUTHORITY SUBMITTALS



St. Michael Hospital

September 21, 1993

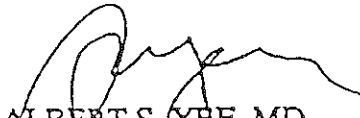


Mr. Martin Schmit
Plant Manager
EOG Disposal Incorporated
5611 West Hemlock St.
Milwaukee, Wi 53223

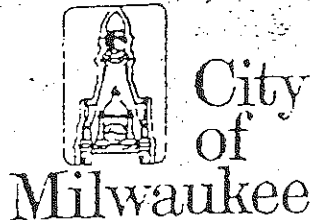
Dear Mr. Schmit:

This letter is to notify EOG Disposal Inc. that St. Michael Hospital has received a copy of their contingency plan. St. Michael Hospital agrees to assist EOG Disposal with the coordination of emergency services.

Sincerely,


ALBERT S. YEE, MD
Medical Director
Emergency Department

ASY;kmd



Department of Police

Philip Arreola
Chief of Police

September 16, 1993

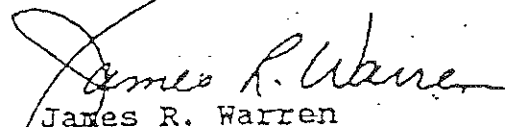
Mr. Martin Schmit
Plant Manager
EOG Disposal Incorporated
5611 West Hemlock Street
Milwaukee, WI 53223

Dear Mr. Schmit:

This letter is to notify EOG Disposal Incorporated that the City of Milwaukee Police Department has received a copy of their contingency plan. The City of Milwaukee Police Department agrees to assist EOG Disposal with the coordination of emergency services.

Sincerely,

Philip Arreola
Chief of Police


James R. Warren
Deputy Inspector of Police
Director - Training Bureau

PA:JRW:lr



5611 West Hemlock Street • Milwaukee, WI 53223

EOG Disposal, Inc.

(414) 353-1156 • Fax (414) 353-1822

(800) 234-1156

August 26, 1993

Captain Doug Holton
Milwaukee Fire Department
Engine #9
4141 West Mill Road
Milwaukee, WI 53223


Dear Sir,

As per our telephone conversation of this yesterday, enclosed please find a copy of the Contingency Plan for EOG Disposal, Incorporated. EOG Disposal Inc. has recently filed for an Interim License for Hazardous Waste Storage. As part of the application we are required per Wisconsin Administrative Code NR 630.22(1)(e)(7) to provide the local fire department with a copy of our contingency plan. We are also requesting a letter of agreement stating that the Milwaukee Fire Department, Engine #9 will assist EOG Disposal Inc. with the coordination of emergency services.

I have enclosed a draft agreement letter for your review. If you should have any questions regarding this request please contact me.

Thank you.

Sincerely,
EOG Disposal, Inc.


Kandylee Schmit
Marketing Analyst

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

*Captain Doug Holton
Waukegan Fire Department*

4a. Article Number

P239 317 566

4b. Service Type

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

JUL 13 1993

5. Signature (Addressee)

Michael H. Matthews

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

Thank you for using Return Receipt Service.

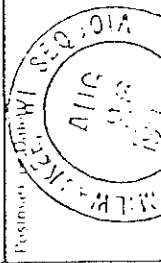
PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 DOMESTIC RETURN RECEIPT

239 317 566

Receipt for
Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>Captain Doug Holton</i>	
Address <i>Waukegan Fire Dept.</i>	
City, State, and ZIP Code <i>4141 W. Hill Rd. Englewood, IL 60122</i>	
Postage	\$ 2.90
Registered Fee	1.00
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Service Fee	1.00
Signature and Address Verification Fee	
Postage and Insurance	\$ 4.90



PS Form 3800, June 1991



5611 West Hemlock Street • Milwaukee, WI 53223

EOG Disposal, Inc.

(414) 353-1156 • Fax (414) 353-1822

(800) 234-1156

August 26, 1993

Mr. Larry Gardner
Deputy Chief
City of Milwaukee Fire Department
711 West Wells Street
Milwaukee, WI 53233

Dear Sir,

Enclosed please find a copy of the Contingency Plan for EOG Disposal, Incorporated. EOG Disposal Inc. has recently filed for an Interim License for Hazardous Waste Storage. As part of the application we are required per Wisconsin Administrative Code NR 630.22(1)(e)(7) to provide the local fire department with a copy of our contingency plan. We are also requesting a letter of agreement stating that the City of Milwaukee Fire Department will assist EOG Disposal Inc. with the coordination of emergency services.

I have enclosed a draft agreement letter for your review. If you should have any questions regarding this request please contact me.

Thank you.

Sincerely,
EOG Disposal, Inc.

Kandylee Schmit
Marketing Analyst

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
 - ☐ Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:

Mr. Larry Gardner
Deputy Chief
City of Milwaukee Fire Dept.

4a. Article Number

P 239 317 499

4b. Service Type

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☒ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

8/27/93

5. Signature (Addressee)

[Signature]

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 ★ U.S.G.P.O.: 1992-307-530

DOMESTIC RETURN RECEIPT

PS Form 3800, June 1991

Sent to LARRY GARDNER	
Working in City of Milwaukee Fire Dept.	
Postage and Air Mail 7 Milwaukee Fire Dept.	
Postage	\$2.13
Additional Fee	1.00
Special Delivery Fee	
Insured Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.00
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$4.13
Postmark	MILWAUKEE, WI AUG 26 1993 USPS



**Receipt for
Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

P 239 317 499

